The Builder.

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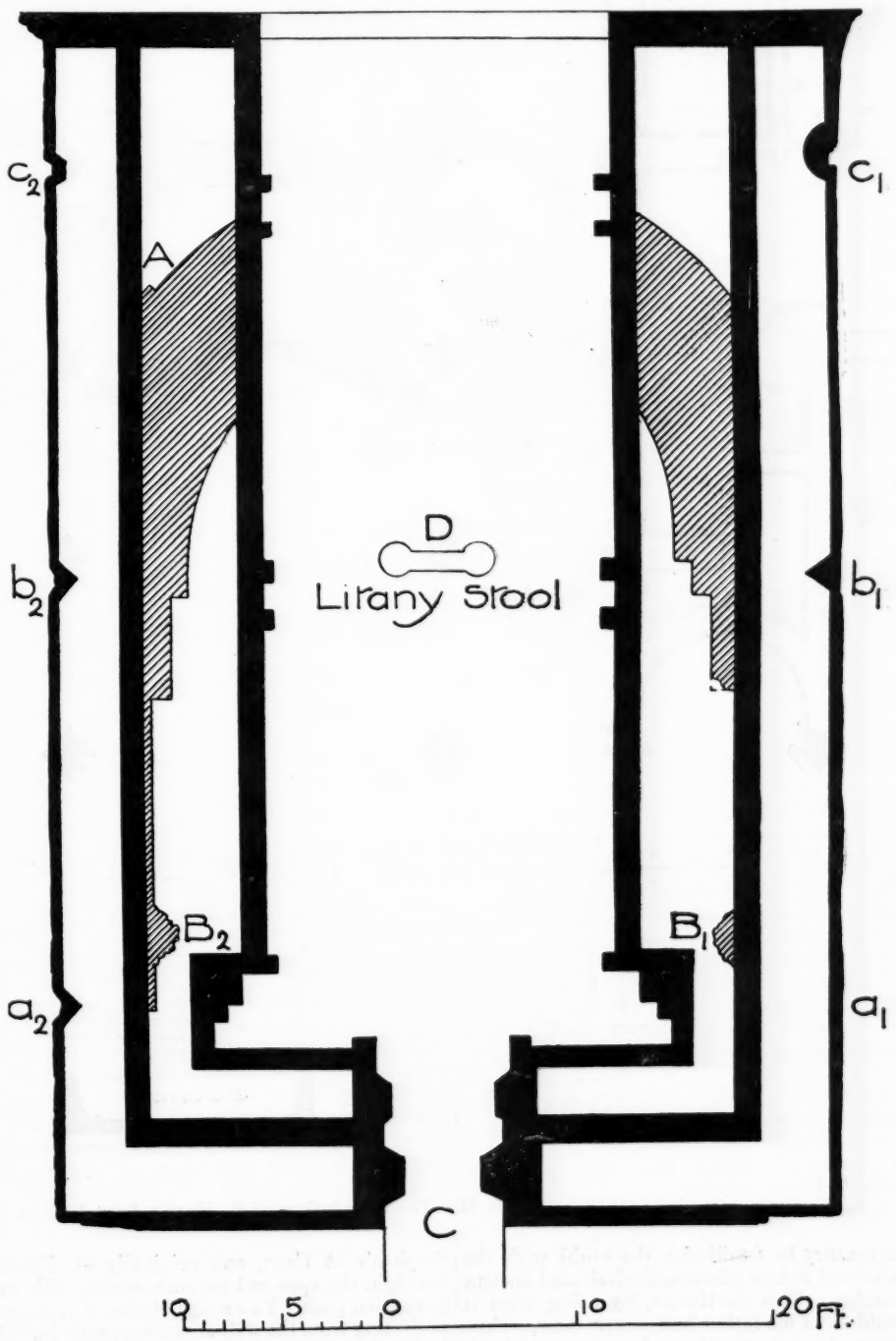
Recent Excavations in the Presbytery of Lincoln Minster.

THE Cathedral of Lincoln, in common with the majority of our English cathedrals and minsters, has successively received more than one eastward prolongation. As originally built by Remigius, the first Norman bishop of the great Mercian diocese, by whom the see was removed from Dorchester-on-Thames to Lincoln and the first cathedral church erected (d. 1092), the eastern limb of the cathedral was short, and apparently not provided with aisles. After standing for a century the Norman choir was removed to make way for that of Bishop Hugh of Avalon, the "St. Hugh" of Lincoln tradition and Carthusian hagiology (d. 1200). The Burgundian prelate's building was in every way larger and more stately than the stern and simple fabric of his Norman predecessor, and was considerably more than twice its length. This new extension terminated in an apse, which, after an existence of not more than forty or fifty years, was demolished for the further prolongation of the church by the erection of the presbytery or angel choir, for the reception of the shrine of the then recently canonised bishop and his wonder-working remains. This last addition to the fabric was made between 1255 (when permission was given by Henry III. for the removal of the eastern city wall to allow of the extension of the cathedral) and 1280, when the relics of St. Hugh were solemnly translated, with circumstances of the greatest pomp, to their new home.

With the last of these extensions, the so-called "angel choir," we are not now concerned. Happily no restoring or devastating hand (the words are too often synonymous) has been laid upon it, and it stands the same in all its main architectural features as it was left by its builders, confessedly the most perfect example of the best period of Gothic architecture, and, in Mr. Freeman's eulogistic words, "one of the loveliest of human works." With the eastern terminations of the churches of Remigius and St. Hugh the case is different. Both have been entirely demolished down to the foundations, which afford the only means of determining their form and arrangement. For this purpose, however, the materials, some long since known and others only recently brought to light, though scanty, are sufficient, and enable us to lay down with accuracy the ground plan of the buildings, and, by comparison with other parts of the same dates, to give a reasonable guess at their architectural composition and general contour.

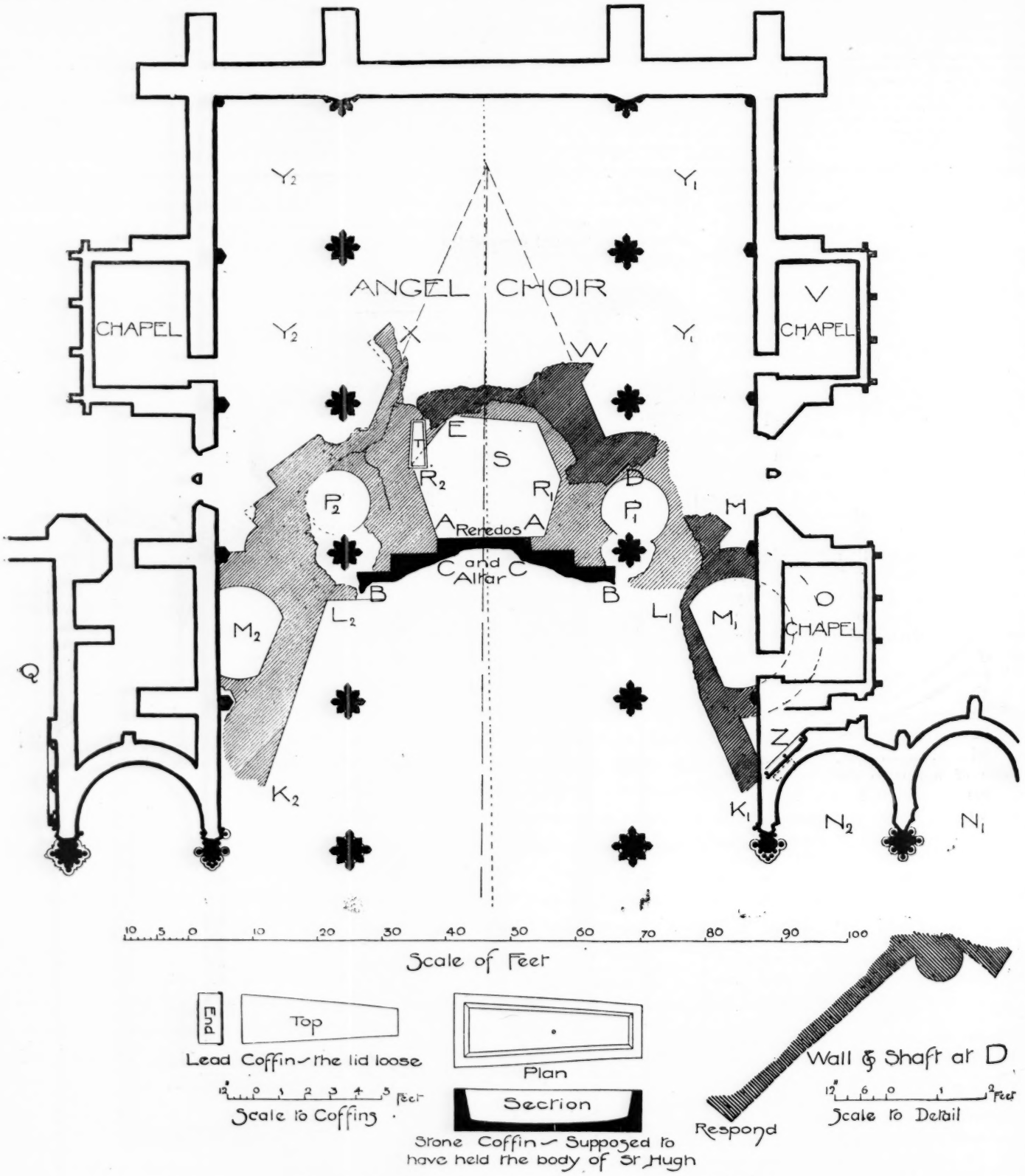


Plan I.—The Foundations of the Norman Choir of Lincoln Cathedral.

To begin with the eastern limb of the Church of Remigius (plan I.). Mediæval builders were, as a rule, very sparing of their labour, and, when rebuilding or enlarging a church, never removed a foot more of old work than was absolutely essential for the erection of the new. So when Geoffry of Noyers, Bishop Hugh's architect, was engaged on the erection of the present choir, he did not trouble himself to pull down the whole of Remigius's work, but left the lower courses of the walls standing, knowing that the side portions would be concealed by the raised platform of the choir stalls, and the central part buried in the new and higher

floor. Whether the existence of these precious traces of the old work was previously known is uncertain. Probably the cathedral workmen, in the course of their operations, became acquainted with them. But for all practical purposes they were discovered in 1853 by Mr. T. J. Willson, the son of one whose name deserves honourable mention, the late Mr. E. J. Willson, the contemporary and fellow labourer of Britton and Pugin in those great architectural publications which did so much in the early part of the century to familiarise the world with the forms and details of our cathedrals and ancient churches. This gentleman, by doing what it would seem his father had never done,—close as were his investigations of every part of the cathedral, of which he at one time proposed to write the history, viz., by descending with a lantern beneath the floor of the stalls, discovered the foundation of the whole eastern limb of the Norman church, with the springings of its semicircular apse. The accompanying ground-plan (plan I.), taken from actual measurement by the present clerk of the works under Mr. Pearson, Mr. J. J. Smith, will explain the nature of the remains better than any description. The lighter shade represents the Norman foundations, the darker tint indicates the framework of the choir stalls. It will be seen that the Norman choir was very short, not reaching beyond the second bay of the existing choir, and was 10 ft. narrower. A fragment of an external pilaster buttress to the north-east of the apse (A) proves that, as at St. Stephen's at Caen, and originally at Peterborough, the apse had no surrounding aisle or procession path. Two rough blocks of masonry projecting from the wall at the west end (B_1, B_2) mark the position of the great transverse arch of the choir. The length of the chord of the apse was 25 ft., and the walls were 8 ft. thick.*

The first extension of the choir or eastern limb was made, as has been already said, when the reconstruction of the cathedral was commenced by St. Hugh in the erection of a new and much enlarged eastern limb. The foundation of this work was laid in 1192, and St. Hugh died in 1200. Between these two dates, therefore, St. Hugh's work must be placed. St. Hugh's addition comprised a ritual choir of four bays, succeeded by a second transept, as at Canterbury, Salisbury, Beverley, Worcester, and Rochester, and, though with smaller projection and now absorbed in the widened aisles, at York. Each arm of the transept had two semicircular or segmental chapels attached to the eastern wall. How far St. Hugh's building extended beyond the transept, and what its form was, there was no visible evidence to determine, the whole having been taken down



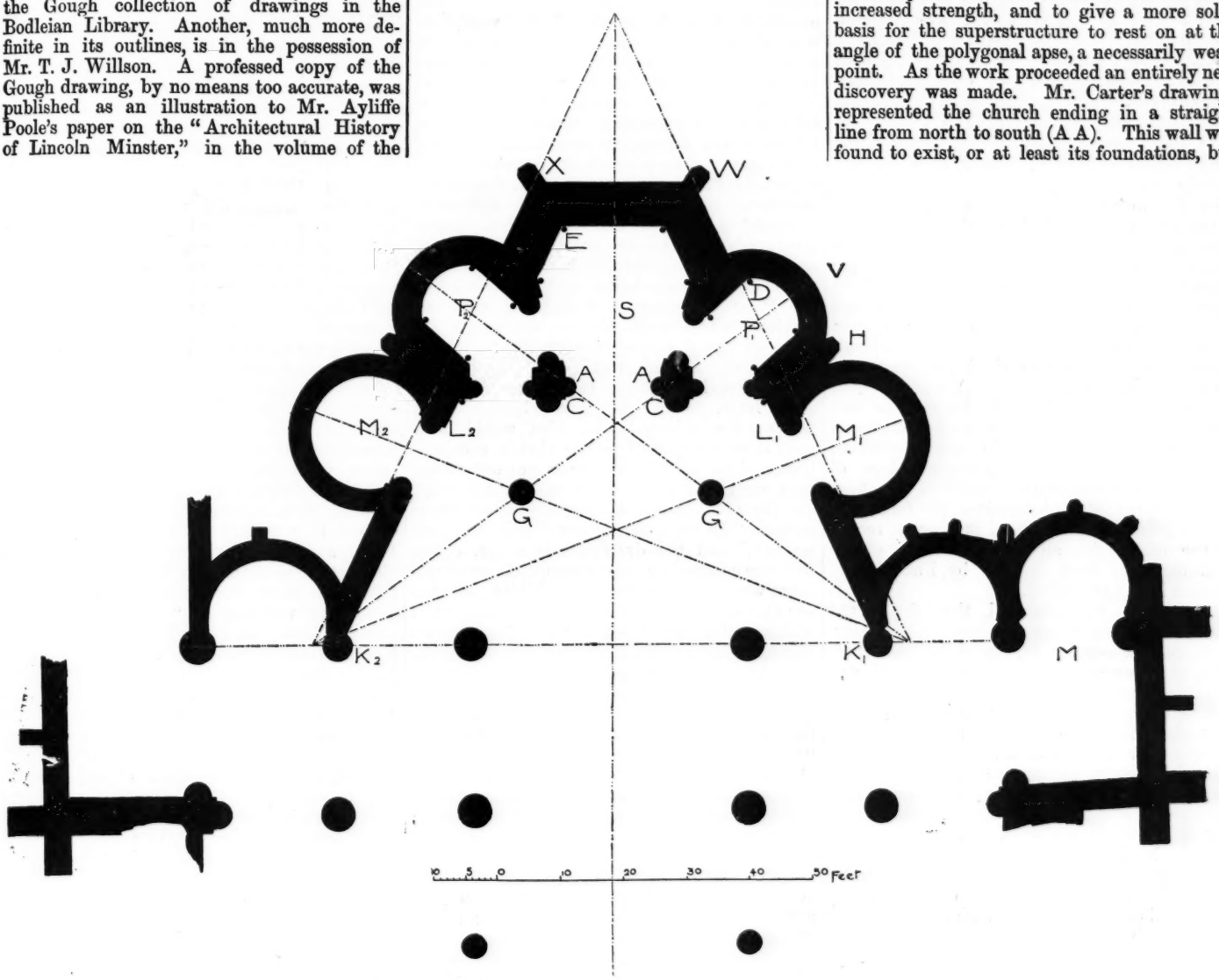
Plan II.—The Foundations of St. Hugh's Apse, Lincoln Cathedral.

* The letters a_1 a_2 b_1 b_2 c_1 c_2, in the plan indicate the lower parts of the vaulting or wall shafts of St. Hugh's choir, the middle portions of which were removed to make room for the backing of the new stalls erected by Treasurer Welbourne (d. 1380), the stumps being fitted with corbels of the same date. The economy of labour characteristic of the Mediæval workmen is shown by their allowing the shafts to remain as soon as they got below the floor of the stalls, and were therefore out of sight.

on the erection of the thirteenth-century extension, the presbytery or Angel Choir. On these points, however, sufficient evidence has always existed, and still exists, beneath the pavement of the church, as the foundations which, originally discovered on the paving of the cathedral in 1791, and imperfectly measured and planned at that time, have been again laid bare in the last few months, and accurately measured and drawn by Mr. Smith. The earlier plans were made by the Rev. John Carter, then the head-master of the Lincoln Grammar School, who had a very intelligent love for Gothic architecture, and was an adequate draughtsman. One of his plans, made "from memory," in 1792, is preserved among the Gough collection of drawings in the Bodleian Library. Another, much more definite in its outlines, is in the possession of Mr. T. J. Willson. A professed copy of the Gough drawing, by no means too accurate, was published as an illustration to Mr. Ayliffe Poole's paper on the "Architectural History of Lincoln Minster," in the volume of the Transactions of the Associated Architectural Societies for 1857. This was the first time this ground plan had been given to the world. A notice of the original form of the east end of St. Hugh's church, as derived from these explorations, was to be found in a note to Wild's "Lincoln Cathedral," p. 8,* but to Mr. Poole belongs the merit of having made it generally known, and of interpreting the indications afforded by the foundations, if not with perfect accuracy, yet as nearly so as the drawings allowed. The suggestion made by Mr. Poole that St. Hugh's church "terminated in a semi-hexagon with a chapel attached to each side," has been fully confirmed by the recent excavations, but the theory that the "circular appendages" at the eastern angles of the apse were "stair-turrets," like those which flank the apse at Peterborough, which has been generally accepted, has been as completely disproved by them.

Of these explorations the history is as follows. At the end of November last year (1886) a portion of the pavement at the south-west angle of the south aisle of the presbytery (K_1 plans II. III.) requiring repair, the slabs were taken up. Those who directed the work knew that the foundations drawn by Mr. Carter probably existed on this very spot, and desired the workmen to be on the look out for them. They very speedily came upon the south wall of the semi-hexagonal apse (K_1L_1) and the walls of a segmental chapel (M_1), corresponding in form to the southernmost chapel of the south-eastern transept (N_1) attached to it. These were traced as far as Bishop Longland's chantry (O), which had been partially built on its site, allowed. When at a later period the investigation was extended to the northern side, the results exactly corresponded with those on the south. There was the same sloping wall (K_2L_2) and the same annexed segmental chapel (M_2). The investigation now became so interesting that it was determined to carry it out thoroughly, irrespective of any supposed repairs required by the pavement. The next part examined was what Mr. Poole calls the "circular appendages" at the northern and southern angles of the end wall of the apse (P_1P_2). The idea previously entertained that these had been stair-turrets was negatived by the discovery of a fragment of two dressed walls, one partially curved, the other straight, meeting at an angle (D) with the footing of a small wall shaft still *in situ* at the junction,* while careful digging in the centre of the circular void failed to discover any trace of the foundation of a newel. Mr. Pearson, after devoting much time and thought to the subject, has come to the conclusion that these appendages represent actual chapels of small dimensions, such as are found in some of the French churches, as at Chartres and St. Ouen at Rouen, wedged in, as it were, between chapels of larger dimensions and greater projection. Mr. Pearson's development of the ground-plan from the existing remains is given in plan III. It will be seen that he considers that the foundations are those of two small chapels with an external curved wall (V), but quadrangular within, vaulted from four wall shafts, and approached from the aisle or procession path by a triangular vaulted severy, such as we see at Ely behind the diagonal arches of the octagon. The circular form of the interior Mr. Pearson considers to be due to the builders having carried the foundations through uniformly from the outer wall for the sake of increased strength, and to give a more solid basis for the superstructure to rest on at the angle of the polygonal apse, a necessarily weak point. As the work proceeded an entirely new discovery was made. Mr. Carter's drawings represented the church ending in a straight line from north to south (A A). This wall was found to exist, or at least its foundations, but not as a terminal wall, but either as a bonding wall below the ground to tie the angles of the hexagon together for greater strength (as was the case with the segmental chapels), or as the base of a screen or reredos. But beyond this wall the foundations of a hexagonal chapel of 23 ft. internal diameter were discovered (S), occupying a corresponding position to the chapel popularly known as "Becket's Crown" at the east end of Canterbury Cathedral. As will be seen on plan II. the plan of this chapel was laid out inaccurately, its transverse axis R_1R_2 not being at right angles with the longitudinal axis of the church. The external angles of this and the other chapels were strengthened by buttresses (WX), of which the best preserved was that between the segmental and the smaller chapel on the south side (H).

Such a group of apsidal chapels surrounding the chief apse was more a Continental than an English arrangement. We find examples at Norwich and at Tewkesbury, and in Westminster Abbey, where the Continental influence is very evident throughout the eastern part of the building; and recent excavations prove that they existed at the great Cluniac Priory at Lewes. But it was a foreign feature which



Plan III.—Development of the Ground Plan of St. Hugh's Apse, by Mr. J. L. Pearson, R.A.

* "When this part of the church was new paved in 1791 some foundations were discovered, by which it appeared that St. Hugh's Church terminated in a half hexagon, of which two sides extended from the angles of the east transept to a line somewhat within the present altar-screen."—Wild's *Lincoln*, p.

* This wall and the annexed shaft will be seen drawn on a larger scale in the margin of plan II.

did not take root in our island. The ground plans of French churches given by M. Viollet-le-Duc in the first volume of his "Dictionnaire" offer several curious parallels to the Lincoln arrangement in the alternation of larger and smaller apsidal chapels surrounding the great apse,* and similar examples are presented by some of the German churches. One point of remarkable interest has become apparent in Mr. Pearson's investigations, and is shown on his ground plan (plan III). This is that a triangle, the base of which is given by a line drawn through the centre of the columns on a line with the east wall of the eastern transept, gives the lines on which much of the work is set out. The centres of the little chapels (P_1, P_2) fall almost in the centres of the sides of this triangle. Mr. Pearson remarks that there are parallels in Germany, especially in Bohemia, where churches and annexed chapels are found with triangular endings, and with some chapels of a hexagonal form added on at the extreme end.†

It should be mentioned that through the larger extent of the explorations, rude concrete foundations, marked by a lighter tint in plan II., alone remained, the upper surface being 1 ft. 4 in. or 1 ft. 5 in. below the surface. The portions of actual walling above the original floor-line which were discovered are shaded in a darker tint. The wall here reaches to within about 8 in. of the present floor. The most considerable fragments were those of the south diagonal wall of the semi-hexagon, K_1, L_1, and the springing of the curved wall of the annexed chapel (M_1), together with a considerable portion of the eastern and southern walls of the eastern hexagonal chapel W X, and of the walls of the smaller southern chapel at (D). A very important piece of wall at the north-eastern angle of the hexagonal chapel at E determines its form and dimensions. To preserve a permanent record of the discoveries all the chief lines of the building have been marked by lines deeply incised in the pavement.

It should be remarked that the recent discoveries give a clue to one of the many architectural puzzles suggested by this cathedral, as shown on plan II. The northern wall of the northernmost chapel of the south-eastern transept (N_2), originally dedicated to St. Paul, is straight instead of curved, and has on its outer face a portion of a shafted arcade (Z). This has every appearance of having been originally internal, and it seems to indicate the existence of a little chapel squeezed in in the space between the two larger segmental chapels, N_2, M_1.

The supposed sepulchre of St. Hugh, which occupied the north-east angle of the eastern hexagonal chapel (T), over which a Renaissance table tomb had been erected by Bishop Fuller after the Restoration, proved, on investigation, to be quite empty of human remains. A stone coffin was discovered containing one rudely formed of sheets of lead unsoldered. This inner coffin was shown by the stains on its sides to have once contained a human body, but this had been abstracted, leaving only portions of decaying vestments. Microscopical and chemical investigation showed remains of flaxen and silken tissues, intermingled with fine gold threads, but any traces of human remains were entirely absent. The whole, coffin and contents, were carefully replaced.

NOTES.

WE have received from the "Société Centrale d'Architecture" of Belgium a pamphlet on public architectural competitions.‡ The pamphlet includes two Reports, addressed by the Société to the Government and to communal and provincial administrations, the committees of hospitals, and other persons in positions of public trust: the first considering the advantages and disadvantages of competitions; the second treating of the best method of organising them. The first Report sums up in favour of competitions, which it appears have been little countenanced in Belgium, with the consequence, says the Report, that Belgian architects are obliged to go into foreign competitions in search of fame and reputation, being "écartés dans leur pays." Another consequence is, according to the Report, that many buildings are not given to the best men, and that certain public buildings, of which a list is given, would have fallen into very different hands and shown a very different type of architectural design if they had been opened to public competition. The Report on the Organisation of Competitions mentions some instances of the victimisation of architects, which it is interesting to compare with our experiences in this country. In the case of the Hospice de l'Harmonie at Verviers, the successful architect was expected, for a premium amounting to one per cent. on the estimated outlay, to furnish the working drawings and every instruction necessary for the execution of the building, without further remuneration. In regard to the double system of competition (sketches first and finished designs afterwards), the Report sums up some of the reasons for and against it, the most important reason in its favour being that put forward at the Paris Congress of Architects, that an architect whose main idea in the design is a bad one "ne s'en rend pas compte toujours" (which we should think very probable); he finishes his design laboriously in faith and hope, only to lose his labour; whereas the badness of his idea would have been at once apparent on the sketch competition, and he would have been put out of his pain with no further waste of tissue over it. On the other hand, M. Hermant's opinion is quoted, "Le concours à deux degrés me gêne un peu," and the drawback is noted, either that one competitor may appropriate another's ideas when the sketches are exhibited, or that the sketches must not be publicly exhibited; which latter the Report regards (justly, we think), as the greater evil of the two. After all, it ought to be easy to get over this objection by simply giving competitors to understand that their finished designs were expected to be on the main lines of their sketches. If we rightly understand, the principle of the double competition has been formally approved by the Belgian Society, but only in the case of buildings the cost of which would exceed 100,000 fr.; much too low a limit, in our opinion. Nothing under 10,000*l.* value should be put up to double competition, if to public competition at all. To the Report is attached a proposed schedule of rules for public architectural competitions in Belgium. The 5th article provides that architects should send in two sealed envelopes, one containing, as usual, the name and address, with the motto outside, the other containing the names of two architects whom the competitor desires to see on the jury. The two architects having the greatest number of votes are to be elected on the jury. But the rules do not seem to provide for the very probable case of one or both of these being among the competitors. What is to be done then?

THE recent decision of Mr. Justice Kay in the case of MacManus *v.* Cooke should be taken note of by house-owners. The plaintiff and the defendant made a verbal agreement by which each party agreed to make certain alterations in their premises so as to give to the premises of each a sufficient quantity of light. The plaintiff had partially performed his portion of the agreement when the defendant refused to make the alterations which he had undertaken to do. The Statute of of Frauds is an Act well known to successive generations of lawyers, and the question arose whether a part performance by the plaintiff was sufficient to enable him to compel the defendant to fulfil the agreement on his side, so that the absence of a written agreement should not cause the Statute of Frauds to prevent him from succeeding in his action. Mr. Justice Kay decided that the doctrine of part performance applied, and gave judgment for the plaintiff. This decision is satisfactory; but, at the same time, owners of property should be careful to put such agreements as these into writing, because it is laid down by the fourth section of the Statute of Frauds that no action shall be brought upon "any contract or sale of lands, tenements, or hereditaments, or any interest in or concerning them, or upon any agreement that is not to be performed within the space of one year from the making thereof, unless the agreement upon which such action shall be brought, or some memorandum or note thereof shall be in writing or signed by the party to be charged therewith."

THE Society of Italian Engineers and Architects of Rome have recently published their annual report, which is preceded by a note on the progress and scope of the Society. On the 1st of January, 1871, at a time that numerous associations of a variety of form and object were founded, a society called the Technical Club was formed, which, although the definite purpose was of a scientific character, did not exclude festivities and similar objects common to other urban clubs. A desire to bring the association more in conformity with its true proper mission suggested the first change of name in 1876 to the College of Engineers, Architects, and Land Surveyors of Rome, the establishment of monthly meetings for the reading and discussion of papers, and the substitution of the publication of regular proceedings for a journal called *Young Rome*, which was the organ of the Club. In 1877, the surveyors having constituted a separate association for themselves, the institution took the name of the College of Engineers and Architects of Rome, retaining as members such of the surveyors as desired to remain. From that time until 1884, when the fourth Congress of Italian Engineers and Architects took place in Rome, there have been few noteworthy changes. In 1885 four volumes of "Transactions" were published, and the number of members, which had previously decreased to 140, rose in that year to 225. In the following year the society was reconstituted as the Society of Italian Engineers and Architects, chiefly through the exertions of the engineer Giovanni Cadolini, a member of Parliament. The society is more a college of engineers than of architects, as may be seen by the titles of some of the papers read before it, such as, "On Wood Pavements for Streets in Towns," "On the Construction of Railways over Boggy Lands," "On a Formula of Poncelet," "The Transmission of Electric Power at the Monaco Exhibition," &c.

THE Church of Santa Maria dei Miracoli, at Venice, was re-opened on the 8th inst. after having been closed to the public for more than twenty years. The *Venice News*, in commenting on the re-opening, remarks that the work of restoration has been carried out with much greater respect for work than has been exhibited in Venice here and elsewhere (alluding, we presume, to St. Mark's), and that the sculptured parts, which are by far the most important, have been respected and preserved. Most of the marble facing, both inside and out, has, however, been removed or scraped, and, unfortunately, it appears has been left without that polishing which is necessary to display the real colour of the marble, and to preserve it from the weather. We gave a plan of the church, with a translation of some antiquarian notes relating to the fabric by Signor Giacomo Boni from a monograph in the "Archivio Veneto" (2nd series, vol. xxxiii., part I.), in our last week's number (pp. 711-13).

IT has been long supposed that the story of Perseus and the Grey Sisters with their one eye, though familiar in Greek literature, was unknown to Greek art. In the last issue of the German *Mittheilungen* (xi. 4), Dr. Boehlau puts an end to this supposition. He republishes a beautiful little Athenian pyxis, on which the scene of the stealing of the eye is represented with singular directness and simplicity. "Republishes," we advisedly say, for the pyxis had

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* We may refer to Vignorry-sur-Marne, p. 169; Fontevraud, p. 171; St. Etienne de Nevers, p. 173; Rouen, p. 237; Chartres, p. 235; St. Ouen, p. 239.

† Grueber's "Kunst der Mittelalter in Böhman" may be consulted. See Hohenfurst, p. 62, fig. 139; Strakonic, p. 67, fig. 159; Humpolec, p. 43, fig. 75; Frauenthal, p. 44, fig. 77.

‡ Concours Publics: leur Utilité, leur Organisation. Bruxelles: Alliance Typographique. 1887.

long been known to archæologists, but unfortunately only through a careless inaccurate drawing published in 1879 by Dr. Gaedechen. In this drawing the one eye, the main point of the story, was omitted, and the three sisters were drawn with seeing instead of blind eyes. The pyxis was found close to the ὀρφανοτροφεῖον at the Peiræos ; it belonged to the Philemon collection, and passed with that collection into the possession of the Athenian Archæological Society. The three sisters are represented as young maidens with dark hair, a characteristic euphemism of the vase-painter ; he chooses to forget that they were "hoary from their birth" (ἐκ γενετῆς πολιᾶς), though he remembers that they were fair of face (καλλιπαρῄους) ; they are all three seated and hold sceptres in their hands, for they are princesses, daughters of the old sea-king Phorkys. The sister to the right holds the eye in her hand, and reaches it out to the second sister, but Perseus, who has just flown up, throws himself in between them. The eyes of all three sisters are drawn blind, according to the conventional Greek manner, *i.e.*, without pupil. On the other side of the pyxis is a gathering of the gods interested in Perseus, — Athene, Poseidon (the lover of Medusa), Hermes, and old Phorkys himself. Dr. Boehlau traces in an interesting paper the various literary forms of the myth.

IN the Ἄστυ (No. 77) a rough reproduction is given of a monument recently discovered on the Acropolis, and, so far, unique of its kind. This remarkable piece of work is a bronze relief, made up of two thin plates, each of which represents one side of a figure. The two plates are fastened together by small nails. Their joint thickness is 3-4 mm. The relief is worked *à jour*. It is almost flat, but on one (the right) side, there is slight modelling, to which the opposite side does not correspond. The whole working of the right side is superior ; traces of gold on the hair and garment are visible only on this side. The relief represents the goddess Athene. She wears chiton and peplos, and a large ægis, but no helmet. It is possible that she may have carried this in her left hand, which has suffered much from oxidation. Her right probably held a phial. The style is much more natural than that of the numerous archaic female figures in company with which it was found ; but from traces of fire in the gold work, it is supposed to be previous to the Persian invasion. The monument is so remarkable that we deferred our note of it till reliable particulars appeared in the German *Mittheilungen*.

IT appears that the leading of the Fairford windows is now so insecure that new work is absolutely required. We are glad to find that no attempt is to be made to "restore" these remarkable windows, but that the glass is to be replaced in its new setting exactly as it is at this moment. This judicious decision will give confidence to those who subscribe to the repairs fund, now being collected by the vicar, that under the guise of reparation, new work will not be introduced. There are few places which better repay a visit than Fairford, not only on account of these quaint windows, but because this Gloucestershire village is a singularly pleasing example of picturesque English scenery.

A RECENT fire and a sale of salvage will have completed the devastation of Sir Christopher Wren's Church of St. Mary Magdalen (Old Fish-street) in Knightrider-street, by Doctors' Commons. Tenders have been invited for the purchase of the remaining materials and fittings, including the bell, some lead, timber, ironwork, and woodwork, as recovered from the conflagration of last year. Steps are already taken by the Bishop of London for uniting the two parishes of St. Mary Magdalen and St. Gregory-by-St.-Paul with that of St. Martin, Ludgate, under provisions of the late Bishop's Union of Benefices Act as applicable to the City of London.

A WELL-KNOWN firm of auctioneers have received instructions for the sale of the freehold manorial estate of Horton, in Northamptonshire. The property extends over some 4,000 acres in all, and includes numerous farms, with their houses, buildings, &c., together with several homesteads and holdings in Hackleton, Quinton, and Piddington parishes. Horton House, seat of the Gunning family, was originally erected by the celebrated Lord Halifax. Situated on the county's border, it lies about seven miles south-east of Northampton, on the road to Newport Pagnell, in the midst of a good shooting and fishing country, and in the neighbourhood of the Pytchley and Grafton hunts.

SIR FREDERICK LEIGHTON'S suggestion at the dinner of the Institute that the toast of "Art" would be more appropriately honoured by "a well-filled and pregnant pause of silence" than by speech was anticipated by Artemus Ward on an occasion when he was called upon to respond to the toast of "The Press" at a Ben. Franklin festival held in Cleveland. He rose to his feet, hung his head for a few minutes in silence, and then sat down, having said nothing. In his account of the festival in the next day's issue of his prper, the *Plaindealer*, his speech was reported by a blank space of about half a column of eloquent silence.

LORD GRIMTHORPE addresses to one of the Hertfordshire papers an *In memoriam* letter in praise of the late Mr. Longmire, the contractor, who, we very well believe, deserved all Lord Grimthorpe could say of him. On the celebrated occasion of pushing up the wall of the nave at St. Albans, Mr. Longmire and his men were certainly the only persons concerned who understood their business. It appears, however, that Mr. Longmire had a good deal also to say in regard to the decorative details of the restoration, and that Lord Grimthorpe was surprised, considering how little Mr. Longmire had been concerned in ecclesiastical work, at the extent of his knowledge and taste in these matters. It would be easy to have taste enough to astonish Lord Grimthorpe, no doubt ; but it is rather hard upon poor Mr. Longmire, who is dead, and cannot defend himself, that Lord Grimthorpe should attempt to fix upon him part of the responsibility of the architectural bungling at St. Albans, though it is interesting to know how the restoration of one of our most valuable ancient buildings was carried on by a kind of happy-family committee of taste between a lawyer, the clerk of works, and the contractor. Lord Grimthorpe observes in the same letter that it was not true, "as a foolish person had said in the *Builder*," that he never deferred to any one except Mr. Chapple, the late clerk of works. A "foolish person" in Lord Grimthorpe's vocabulary means "a person who does not believe in my omniscience," and in that sense we are foolish enough ; but the statement in regard to what was said in our columns is, of course, no more true than any other of Lord Grimthorpe's imaginary quotations from us ; indeed, the idea of Lord Grimthorpe "deferring" to any one would have seemed rather too grotesque for publication. We should recommend some of the local journals, however, who are Lord Grimthorpe's most obedient servants, to be a little careful how they publish statements about this journal on no better authority than his assertion.

A Memorial of the late Lord Iddesleigh.—A reredos with super altar is to be erected in Upton Pyne Church, near Exeter, the gift of the Countess of Iddesleigh, in memory of her husband, the late Earl of Iddesleigh. The central panel will contain a valuable oil painting of the "Last Supper," purchased by the Earl of Iddesleigh (then Sir Stafford Northcote), during his travels some years since in Italy. The reredos has been designed by Mr. Medley Fulford, architect, and it is to be made and carved in oak and stone, by Messrs. Luscombe & Son, of Exeter.

ARCHITECTURE AT THE ROYAL ACADEMY.—IV.

1616, "Small drawing-room, 1, Grosvenor-crescent," Mr. G. Aitchison, A.R.A. A coloured elevation of a portion of the wall, showing a dark dado, doors, and pilasters, relieved with white arabesque ornament in the panels, and on the architrave of one of the doors, whether painted or inlaid does not appear. Similar decoration is applied to the blocks which form a kind of rustication on the dark fluted pilasters. The architrave of the door seems to require a rather more filled up and continuous ornament than the alternating sprigs shown here. The folding-doors in the next compartment, and the fan-light over them, are filled with stained glass, and here the woodwork is left undecorated so as to give the glazed decoration its full effect. The wall decoration is in two shades of green, relieved with gold. Above is a frieze of birds and arabesque scrolls on a delicate buff ground. This frieze is very pretty in itself, but does not seem quite to belong to the rest of the scheme. This is Mr. Aitchison's only contribution to the exhibition this year, which is to be regretted.

1617, "Oakfield, near Chester," Messrs. Grayson and Ould. A well-treated drawing of a very plain Late Gothic house, with mullions, labels, and battlements; heavy-looking. The picturesque element seems to be relegated to the gate-house in the distance.

1618, "Decoration for a Boudoir," Mr. G. Crichton Hannah. A well-executed small coloured perspective interior of a room, covered on walls and ceilings with the usual elements and emblems which go to make up Louis Seize decoration. The cove of the ceiling is painted with a dark blue ground, with figures and gilt arabesques in relief. The whole is well carried out, but it is a mere repetition of the details of a bad style.

1619, "Design for Upper Panels of Stained-glass Window, Bolton Infirmary," Mr. P. H. Newman. A small coloured drawing showing three panels filled with gracefully-drawn figures of Faith, Hope, and Charity, the margins filled up with ornamental devices of a Renaissance type, not over-refined in idea, but well drawn and coloured, and the colour effect is harmonious; the attic, with rusticated blocks in perspective, on each side of the "Charity" subject, is a mistake for stained-glass design.

1622, "St. Nicholas Church, Newcastle-on-Tyne; now the Cathedral: Reredos, Bishop's Throne, and Choir Fittings." Mr. R. J. Johnson. A large but rather coarse pen interior, showing a lofty reredos, with a rich effect of canopies over rather absurd-looking figures, the heads of which are too large for the bodies. The bishop's throne runs up into a very lofty crocketed spire springing out of an octagonal pinnacled base in several stages; the choir stalls show late Gothic detail, with large "poppy-heads." The best point is the connexion of the reredos with the main walls by a lower panelled wing wall on each side of it.

1623, "3, Hertford-street, Mayfair," Mr. W. Flockhart. A coloured drawing of a brick front of Jacobean character of detail, with modern variations: the main centre window of the principal floor is picturesquely treated, but the composition seems very scrappy, and the hanging on of pilasters to the upper part of the walls, where they perform no constructive function, is an absurdity which fashion cannot reconcile us to. The author has done much better things than this. A plan of the ground-floor of the house is appended.

1624, "Design for a Country Bank," Mr. Arnold B. Mitchell. A very good drawing, and a building with a very picturesque arrangement of windows; somewhat spoiled by the bottle-stopper ornaments and other bits of *rococo* in the upper portion. There is nothing specially to give it the character of a bank. The drawing was published in the *Builder* for October 31, 1885.

1626, "Abbeystead, Wyresdale, Lancashire," Messrs. Douglas & Fordham. A very good tinted drawing of a large and solid-looking Gothic house, another view of which appeared in last year's Academy. A plan might have shown the meaning of the somewhat castellated treatment and more solid and massive style of the block on the left, as compared with the remainder of the house, which can only be conjectured. This drawing and No. 1617, we may observe, though with different architects' names, are obviously by the same hand; both exhibitors being apparently indebted to one

draughtsman for their position on the walls: in which case the draughtsman might at least be allowed to share credit in the catalogue.

1627, "Business Premises, 86, Strand," Mr. A. Drewe. A somewhat picturesque street front in the upper portion, or, meant to be so; but the author's enthusiasm seems to have failed in the ground or shop story, which does not seem in any way to belong to the building above it.

1628, "Three Blocks of Insurance Buildings, Castle-street, Liverpool," Messrs. Grayson & Ould. The nearest of the three is a very well treated street front, and here the shop ground-floor has been properly treated; it is made into a plain basement with massive piers and large elliptic arches over the windows of the shops; a strong cornice cuts this off from the upper portion, which partakes of a Francis I. character, with flat panelled pilasters and mullioned windows; the upper-story windows are arched. The two other buildings of the group appear to become more Classic as they recede from the eye. The whole forms a good and carefully-worked-out group of street fronts to business buildings, and might have claimed to have been hung where it could be better seen.

1629, "Interior View of the proposed Cathedral at Liverpool, looking East," Mr. T. Garner. A fine and effective water-colour drawing, with plenty of polished marble floor, and those reflections which are so effective in a drawing, but which we seldom see developed to this extent in reality. The general character of the design our readers are aware of from former illustrations in our pages; it is a very fine, massive, and dignified resuscitation of the finest type of Mediæval cathedral architecture. The scale of the interior is, however, somewhat dwarfed by the proportion and great projection of the base mouldings and plinth of the nave piers, which gives the impression of their being only about half the height which they must be.

1632, "Church of the Holy Trinity, Long Melford, Suffolk," Mr. E. L. Conder. A careful and minutely-executed measured drawing of the side elevation (south) of this celebrated church, showing also, with cruel fidelity, the beauties of the "compo" tower which disfigures it.

1634, "In Normandy," Mr. E. Jeaffreson Jackson. A good freely-touched pen drawing of a bit of late Gothic building, but hardly of sufficient interest for its position in the hanging.

1636, "Buildings in Progress in Arlington-street and Piccadilly," Mr. W. O. Milne. A very well-executed drawing, but rather deficient in force, which may also be said of the building; it is very flat in effect, and though generally pleasing and in good taste, does not make the most of its splendid situation.

1637, "New Church of the Epiphany, Port Said: Exterior," Mr. W. Bucknall. The interior and a plan and section are shown in 1648. They are both small pen drawings, and the latter hung too high to be seen at all. As an English church in Byzantine style in that part of the world, this is a little architectural event of some interest. The architect might have sent better and larger drawings, but the two he has sent might at any rate have been hung together and so that the drawings could have been seen. It is a very plain building domed over the middle of the nave (there are no aisles), and with semi-domes over transepts and apse. Judging from the drawings the materials would appear to be brick with concrete domes, or the domes cemented.

1640, "Interior of the Church of the Redeemer, Clerkenwell," Mr. J. D. Sedding. One of the finest drawings and one of the most interesting and original designs in the room, upon which, however, we made some comment when we published a reproduction of the drawing (*Builder*, May 7 last). We could have wished, however, we that the connexion between the columns and the springing of the main transverse vaulting ribs had been achieved in some rather less commonplace and well-worn manner than by that of breaking out little slices of the architrave over each capital, a device rather unworthy of the rest of the design.

1641, "105, 107, and 109, Oxford-street," Messrs. Christopher and White. The three numbers appear to be one property and are combined into one design, with a centre and symmetrical sides. The upper portion is solid and well designed, but the whole would have been far more satisfactory if the authors had taken a bolder step and treated the shop basement architecturally, instead of leaving a mere void, only broken by two insufficient-looking columns. In such a case, the more solid the superstructure, the more it seems to call for a solidly-treated basement story. Owners of shop property very likely imagine this is prejudicial to light and the transaction of business, but some of them are beginning to see that the superior architectural effect of an architecturally-treated front has a value, even from the point of view of mere attractiveness to customers; and architects, above all others, should endeavour to impress this on their clients, if they wish to see shop architecture improved.

1642, "Timber and Plaster Ceiling for Blickling Hall," Mr. John H. Pollen. A most extraordinary-looking drawing; a coloured plan of ceiling, treated on more or less Celtic motives; the under sides of the beams and joists are strongly coloured with decorative designs in irregular oblique bands of colour or of small geometric or interlacing pattern, which run over the edges of the joists, and are, therefore, only seen piecemeal, being presumably concluded or further made out on the sides. The soffit of the main beam is decorated by what appears to be an elongated dragon, but we confess its position and anatomy are not very easy to make out on the drawing,—possibly a view of the sides of the beam would assist in the development of this portion also of the design. The space between the rafters in part of the ceiling is occupied apparently by low-relief decoration in plaster; the other portion shows a bold coloured design in large scrolls (intercepted by the joists, and as if continued behind them) intermixed with birds and with knots of interlacing ornament, &c. The treatment of constructional timbers with ornament which entirely ignores their edges or their shape and function generally, and runs riot over the angles, though common enough in Japanese work, is, to our thinking, a decorative mistake; but the author may be congratulated on having done something which is, at all events, quite original, and which compels one to look at it; and, moreover, *outré* as the design is, the colour harmony of the whole is very fine. It would be impossible to say how far one could regard it as a satisfactory decorative treatment of the ceiling, unless we knew the decorative scheme of the room under it.

1646, "Metropolitan Police New Central Offices," Mr. R. Norman Shaw, R.A. This does not, we believe, represent the final form of the design, which is undergoing some alteration. It is an exceedingly solid-looking building, the lower two stories of stone, the upper of brick, the latter portion containing the principal window tiers, which are Classical in treatment, with architraves and pediments to the lower ones, and heavy keystones to the upper ones. A strongly-marked cornice crowns the whole, and at the angles and in the centre of one side are projecting bays, segmental on plan and rising as low turrets above the cornice line, the cornice stopping against them. The brickwork in the upper stories is relieved by horizontal bands of stone. The building as shown here does not display much of its architect's play of fancy, perhaps considered out of place in a building of this class; but it is a capital piece of solid, unpretentious architecture, and it is gratifying to find the authorities going to an architect like Mr. Shaw for such a building, instead of inflicting official architecture upon us. The drawing, a perspective in pen and ink, is an admirable piece of architectural drawing; clear, clean, and precise, without being too formal or hard in touch.

1644, "Entrance to a Provincial Public Building," Mr. Maurice H. Pocock. A coloured piece of detailed elevation. Is this an executed work? It is a good drawing of its kind, and we should suggest that detail elevations like this are a class of drawing of which we might very well have more in the Architecture Room at the Academy. There is some variety and novelty in the detail, but the repetition of three couples of pilasters in three stages, each on its separate surbase, is rather too much of a good thing; and if the cornice over the first-floor order is intended for the main cornice of the building, then the story over it is much too heavy, and out of proportion for an "attic." The stone pilasters stand against a brick wall, and, judging from the shadowing (which would have better more decisive and darker) they must be rather flat, and deficient in projection.

1645, "The Steeple of St. Michael's, Coventry, as restored," Mr. J. Oldrid Scott. A most delicate and beautifully-executed pen drawing of this remarkable rich tower and slender spire, a *tour de force* of building which has revenged itself upon its too adventurous constructors by threatening ruin, and having to be taken down and built up again from the base.

THE PARIS *SALON* OF 1887.

THE Palais d'Industrie contains 2,521 pictures and 1,042 drawings or cartoons. These numbers explain eloquently the difficulty of such a selection as would enable one to give, in a limited space, a general outline of the *Salon*. Many remarkable paintings, too, claim special attention as indications of the strong current setting in the direction of realism and the endeavour to get at the facts of Nature, which is a characteristic of recent art, and against which some fervent disciples of the Classic school seem to strive in vain. Others, like M. Puvis de Chavannes, applaud this realistic tendency in others, while choosing themselves to remain on the heights of Helicon, where no envious competitions or jealousies can trouble their poetic serenity. M. de Chavannes carries to its height this principle of abstraction from reality, and his immense cartoon for the decoration of the Sorbonne is the most complete practical demonstration of his æsthetic theory which has appeared.

This composition is divided into three parts, symbolising Literature, Science, and History and Philosophy. In the centre, on a block of marble, is seated the ancient Sorbonne personified by a tall and fine female figure. At her side are two genii carrying palms and crowns, in homage to illustrious names, dead and living. Eloquence, standing before her, celebrates with a slightly mannered gesture the victories of the "esprit humain." To right and left are grouped figures representing various schools of poetry. From the rock between the two groups gushes a stream, from which young and old eagerly drink. The left compartment is devoted to Philosophy and History. The first group shows the contest between materialism and spiritualism, the latter depicted by a woman in a sombre raiment, who touches with one hand a skull held by a seated figure, and raises the other as pointing to the sky. History, or perhaps, we should say, archæology, is shown as a female figure reading the annals of the past on inscribed stones which are dug up for her study, and further on, by a seated figure of an old man engaged in the study of manuscripts. The figures representing Philosophy and Archæology form a noble and most expressive group, beautifully composed and contrasted. The compartment on the right, dedicated to Science, is not equal to the last named; it shows a group of young men around a statue of Science, vowing themselves to her service with a fervour of expression which shows that M. de Chavannes understands the ardour which inspires the scientific student of to-day; other figures are shown absorbed in the study of botany, zoology, and geometry. This is certainly allegory in its purest and most immaterial form, and the artist has had the opportunity of realising on a great scale his own special aspirations in art. Unfortunately, the drawing of the figures leaves something to be desired, and the cartoon does not give a full idea of what the work will be when finished with that delicate harmony of colour which distinguishes the paintings of M. Puvis de Chavannes, and makes one pass over those deficiencies of execution which his friends wish to reckon among his special merits.

Opposite this huge triptych is another very large work by M. Besnard, who has not troubled mythology in order to find a poetic allegory for the decoration of the Mairie of the First Arrondissement. On the threshold of a house, lighted internally by fire-light, a very old couple are placed, the wife sleeping, leaning on the shoulder of the companion of her life. The latter leans in his turn on a staff, and looks up towards the stars; a young mother and child behind him represent the earlier stages of human life. The contrast between age and death, youth and life, is finely brought out; the figures are expressive and well modelled, the colour fine and satisfactory as to decorative effect. It is altogether a composition which stamps M. Besnard as one of the masters of the new school. This is an allegory simple and obvious in meaning and which is eternally true, and addresses itself to the feelings and experience of all; after which one cares very little for

such allegorical prettinesses as M. Bouguereau's "L'Amour Vainqueur," which is among the popular things of this *Salon*.

It is also for a Paris Mairie that M. Lévy has painted his "La Gloire décernant des Palmes," a pendant to his work in last year's exhibition, but not equal to it in colour. The ceiling by M. Maillard, symbolising "Instruction donnée par la Ville de Paris à ses Enfants," is intended for the Mairie of the Third Arrondissement; an array of stout personages of a remarkably vulgar type. It is odd that the pictures executed for the municipality have never been so classic in character as since the establishment of the public competitions, which were supposed to lead a re-action against the classicality of the Institut.

M. Clairin, who up till now has followed piously in the steps of his former friend, Henri Regnault, and painted Oriental scenes with a richness of colour which made one forgive their theatrical character and composition, has also taken up an unfortunate whim for allegory. His "Apothéose de Victor Hugo" takes us back to the night of the obsequies: Cuirassiers sitting motionless on their horses hold torches which light up a catafalque covered with flowers; while a diaphanous figure, apparently representing Poetry lamenting over the bier, hovers above the line of troops. The colour is false, the effect is false, and the figure which should be the principal becomes only an accessory, the soldiers with their long cloaks forming the most prominent portion of the picture: the whole thing is an absurd mingling of realism and fantasy.

The rest of the allegories are not much happier. The "Armide abandonnée" of M. Jacquet surprises one by a complete absence of anatomical structure or modelling, and the "Andromeda" of M. Carolus Duran, in spite of its unquestionably fine qualities of colour and technique, cannot be counted among the best productions of that accomplished painter. If we pass to historical painting, we find in the "Cleopatra" of M. Cabanel the same precision of drawing, the same finish, the same hardness which have usually characterised the works of this correct painter, who has had such an unfortunate influence on many of the rising generation of painters. The subject, too, is a cruel and revolting one; it represents Cleopatra reclining languidly on a lion skin, watching the effect of various poisons on the unfortunate wretches who have been selected as *corpora vita* for experiment.* The scene wants atmosphere. The marble-looking figure does not seem to detach itself from the draperies, and seems rather as if a part of the decoration of the Egyptian palace which M. Cabanel has painted with great minuteness of detail.

M. Cormon's "Vainqueurs de Salamine" is surrounded by an enthusiastic crowd, in which the feminine element predominates. This large picture, commissioned by the State, would do exceedingly well to decorate the "Foyer de la Danse" at the Opera House, or (better still) for the Cirque Olympique, and the figurantes in short skirts recall the well-known type of the grisettes of Batignolles and Montmartre. One cannot deny to this work, however, the praise of spirit and good decorative effect, as well as a great deal of ability in composition. M. Rochegrosse, of course, gives us one of his usual scenes of slaughter. This time it is the Roman conspirators setting on the body of Cæsar, and all desirous, as Plutarch tells us, "to have a hand in shedding his blood, as if it were the libation at a sacrifice." The picture, painted, one may say, with a kind of fury, shows great deficiencies of technical training, but certainly reveals the true temperament of an artist.

M. François Flameng, more fortunate than M. Puvis de Chavannes, has been able to completely finish, before the *Salon*, the decorative painting commissioned from him for the Sorbonne. The picture, intended for the staircase of the "Faculté des Lettres," is divided into three parts: First, St. Louis giving to Robert de Sorbon the charter of foundation of the Sorbonne; next, Abelard instructing his disciples on the hill of St. Geneviève; and, lastly, the Prior Jean Heynlin installing, in the cellars of the Sorbonne, the first printing-press established in France. M. Flameng has been unfortunate in not being content to remain himself and depend on his own style; he has gone into imitation of early masters; his triptych includes great merits and vexatious defects; his Abelard in particular seems almost like a caricature. The scene is full, however, of curious details, and presents much of interest in an archæological point of view.

M. Paul Laurens, that conscientious and unpretending but really learned artist, takes from the war against the Albigenses the subject for a small painting, of great interest. His "Agitateur du Languedoc" is a work of great power. The monk with the ascetic profile, threatening figure, and coarse garment, forms a striking contrast with the bishops in rich chasubles, immovable in their stalls.

Owing to the official direction given to the subjects of painting during the last few years, religious pictures are becoming more and more rare, since neither the State nor the municipality ever commission a work of this kind, and the church revenues are not sufficient for the ecclesiastical authorities to play the part of Mecænas. Accordingly, most paintings dealing with subjects from the Bible are treated rather as scenes of *genre*, as in the "Salomé" of M. Rochegrosse, or as studies, like the "Herodias" of M. Henner. The "Last Supper" of M. Uhde stands out, however, as an exception. Two years ago this artist exhibited a Biblical composition treated with very modern feeling, and with much originality. His present work has the same characteristics, and his Christ and Apostles are completely free from the trammels of the traditional church painter. Unfortunately, the colouring is dull and grey, and the work is not equal to his former painting. M. Dinet's "Adoration des Bergers" goes to an exaggerated extent in the direction of modern realism, and his "Virgin" is a Parisian grisette, whose type is certainly not in any sense Biblical.

M. Girardot goes to the Old Testament for the subject of his large painting with two figures, "Ruth and Boaz." This composition, painted in a very broad style, is one of real power; the pale and indistinct moonlight effect is finely rendered.

We referred to M. Henner just now. His "Herodias" has, in fact, not the least claim to any Biblical name; but there is a great charm in this young girl, whose blonde and pretty head is familiar enough by this time. Last year it appeared on M. Henner's canvas as "Orpheline," and emerged from a black hood. To-day it emerges, with bare neck, from a red drapery, which gives full value to the whiteness of the arms and bosom; but, in spite of the painter's great ability, this repetition of the same model becomes wearisome.

Military subjects are exceptionally numerous this year; perhaps these are a kind of artistic reflection of the ideas which have been hovering on the political horizon lately. It must be observed that the Government have commissioned a certain number of works for the *salles d'honneur* of various regiments, and the artists who have received these commissions are here in great force. We notice no less than a dozen pictures of this class, worse than mediocre; but one may except from this summary M. Delahaye, M. Morot, and M. J. Lewis Brown.

The first-named has painted with great vigour the charge of the 12th Hussars at Marengo, a picture full of movement and of good detail. Unfortunately the painter, who apparently was not sufficiently up in the anatomy of the horse, has thought well to supplement his studies by instantaneous photographs, the odd results from which are puzzling enough to the public, and which give to the animals the appearance of wooden horses. This result is most of all perceptible in a picture by M. Arus "the Eleventh Artillery at Solferino," which, nevertheless, is not without a certain amount of what is called "go." In M. Aimé Morot's "Bataille de Reischoffen" we find the same powerful qualities which distinguished his "Rezonville" of last year. In the foreground the cuirassiers are in headlong charge: behind them other squadrons remain motionless, waiting for the order to charge. The helmets flash in the sun, and the line of French *tirailleurs* stretches far over the green country, the bright aspect of which contrasts forcibly with the painful incidents of war.

Mr. John Lewis Brown's "Hohenlinden," presented by the State to the eleventh regiment of Chasseurs, is a cleverly composed scene, full of aërial effect, where the wind blows freely over a landscape covered with deep snow. In the foreground the French cavalry are charging the Austrian squares. There is extraordinary life and vigour in this painting, a thorough knowledge of horse painting, and an ability in the treatment of colour which stamps this as one of the best battle pictures in the *Salon*. The Government has unhappily not always been so fortunate in its commissions of this kind. With the exception of one work by M. Sargent, we find among the remainder only such paintings as we prefer to pass over in silence.

By the side of these pictures, in glorification of special events of modern warfare, appears the "Guerre" of M. Roll in all its sad and sanguinary realism. He does not paint the heroic deeds of hand-to-hand fighting. We are here opposed to an invisible enemy, who strikes from a distance. Personal heroism is replaced by the perfection of science. The scene is what may be called brutally real and painted in a masterly manner. The "Aérostation Militaire" of M. Loustaunau makes a pleasant contrast to this. It is a curious scene, carefully observed and depicted. We may equally compliment M. Chaperon on his amusing scene of barrack life, "La Douche au Régiment."

We come here, however, into the field of *genre* painting, which this year, as usual, has numerous votaries, among whom M. Gervex is certainly in the first rank. His "Opération Chirurgicale," is a splendid bit of painting, telling its story admirably. A woman under anæsthetics and half undressed is stretched on a camp bed, surrounded by surgeons, pupils, "religieuses," and nurses. Near her is a table covered with instruments. A clear light illumines the scene and falls on the young patient. The heads of the spectators are superbly modelled, and the whole scene exhibits remarkable executive power. M. Brouillet has also gone to the hospital in search of artistic inspirations, and enables us to assist at a clinical lecture by Dr. Charcot, at a scene of hysteria, which impresses one like a night-mare. In these days, when hypnotism is so much discussed, this picture naturally obtains a success, but its great artistic merit consists in the perfect resemblance in the portraits of Parisian celebrities among the spectators of the scene.

Another scene of modern life is illustrated by M. Béraud, who takes us to the Hall of the Palais de Justice, crowded with black-robed advocates, and plaintiffs and defendants of various types. The "Salle des États" at the Louvre, by M. Béraud, where the idlers crowd round the easels of the amateur painters, is another well-studied scene of every-day life.

M. Albert Fourie is making great progress. His "Noce d'Ouvrier" is a picture of amusing naturalism and wonderfully true. The scene passes on the green before a rural tavern at Yport; all the good people are in their "Sunday things," and rejoicing in this diversion from their usual labours; the bride, charming under her white garland, drinks gaily with an old peasant. Shafts of sunlight stream through the trees and sparkle on the bottles and glasses full of foaming cider.

The paintings of M. Jules Breton recall us to the more tranquil side of country life. Here, robust villagers gather in their crops; there, the peasants return homeward at the end of the day, across fields purpled with the evening light. These pictures give one the impression of the colour of nature at the close of a summer day. This impression is still more vividly given in M. Skredsvig's Norwegian scene, entitled "Le Soir de Saint-Jean," which has the charm and simplicity of Millet. "La Fenaison" of M. Lhermitte recalls the vigorously-painted scenes and true feeling of the lamented Bastien-Lepage; it is a beautiful picture full of nature, though a little uniform in its tonality. The "Pain" of M. Démont Breton should also be mentioned. Before an open oven, the fire from which throws a red gleam over him, a peasant is looking to the baking of the bread; a young wife is looking on with interest, holding two stout children, who jostle each other while the elder looks with a curious eye at the labours of his father. A striking contrast between these healthy children and the *gamins* of M. Pelez' "Nid de Misère," where two poor children, blue with cold, sleep with arms interlaced, scarcely covered with mean rags. M. Pelez likes this class of subject, and parades before us every year these dramas of misery. This may be overdone, but there is more of human interest in them than in the fashionable prettinesses of MM. Heilbuth and Stewart, whose favourite

* "She hath pursued conclusions infinite
Of easy ways to die."
Antony and Cleopatra.

scene is Bougival, the Paradise of Parisian boating people.

The "Theodora" of M. Benjamin Constant, impassible amid her Byzantine luxury, is a worthy pendant to his "Justinien" of last year; and M. Worms re-edits once more his inevitable Spaniards with wearisome persistence. We may notice also the singular picture which M. Raffaelli entitles "La Belle Matinée," and which deserves a better place.

In still life, the admirable fruit paintings of M. Vollon are perfect in their illusive realism, which, in this class of painting at all events, is the object to be aimed at. Those of M. Bergeret are of more precise but also more hard execution. M. Claude exhibits some fish which rival, in realism, the rabbits of M. Philippe Rousseau; and M. Gilbert combines poultry and game successfully on a big canvas, which certainly might with advantage have been reduced to more modest proportions. As for M. Blaize Desgoffes, who has always something of interest for those who admire his perfect execution (devoid, however, of all sentiment), there are some peaches and grapes of his which seem to be carved out of the same onyx as the marvellous vase which accompanies them.

The school of landscape-painters still includes some artists whose works bear the indelible stamp of their former successes. In this category of forgotten talents are the names of MM. Bellel, Benouville, de Curzon, and Ciceri, whose pictures, most conscientiously painted, appear to-day singularly old-fashioned. For them the study of nature was subordinate to certain conventions which they could not escape from. The sky, the trees, the distances, are painted, not as they really appear, but after a traditional and almost mathematical formula. M. Français himself, in spite of his great talent, has barely escaped these dogmatic exigencies, and his decorative panel, "Winter," although a very clever work, presents a hard metallic aspect, which contrasts disagreeably with the clear green of M. Bernier, the deep-toned landscape of M. Binet, the misty light in M. Péraire's scenes, or, still more, the fresh verdure of M. Pelouze, whose "Source Bergerette" is particularly remarkable. M. Normann, who for some time has given us landscapes painted in a bizarre tone, has this year made a great success with a midnight sun, the strange purple colour of which takes by surprise a public who are little acquainted with Norwegian atmospheric phenomena. We must humbly confess that we much prefer to these *tours de force*, the simple and true landscapes of MM. Hareux, Rapin, and Harpignies.

After having, up to the present time, confined himself exclusively to *genre* painting, M. Duez has resolutely attacked landscapes, and with this first attempt has at once established himself as a master. The cows resting in the grass, on the top of a cliff in Normandy, seem to be gazing placidly at the moon, which is reflected in the sea. There is a real artistic sentiment in this simple composition, a great deal of poetry, a remarkable power of execution. As powerful in effect, and as simple in the means employed, is the "Bœufs au Labourage" of M. Vayson; the strong animals stand out in relief against a blue sky. This picture gives a sense of reality; a faithful interpretation of nature. We must also mention a picture representing a shepherdess watching in the twilight, by the same painter.

There are always plenty of sea-pieces. The picturesque shores of the Mediterranean have tempted many painters, amongst whom M. Olive, after M. Vollon, is the only one who has thought of painting the Port of Marseilles with its true colouring. The same faithful interpretation characterises the two views of Havre by M. Maurice Courant. Very curious also are the two sea-pieces of M. Mesdag, especially the view of Scheveningen, and the view of the Thames by M. Lionel Walden, where the steamboats are silhouetted against a rosy mist.

We will conclude by a glance at the portraits. Naturally enough there are plenty of repetitions of General Boulanger. M. Debat-Ponsan represents him on horseback, in full uniform, saluting the public with a pretentious gesture; and M. Armand Dumaresq gives us a bust portrait of him, with a grave and pre-occupied air. Resemblance apart, the merits of these official portraits is small enough. They entirely want sincerity and simplicity. The portrait of M. Alexandre Dumas is remarkable for an intensity of life, a vivacity of expression, which places it among the best productions of M. Bonnat. It is a pity that he has exaggerated, by a wilful coarseness of handling, the accentuation of the features, which thus lose the *finesse* of expression so characteristic of the author of the "Dame aux Camelias." We do not care for M. Bouguereau's expressionless portrait of a little girl. M. Léon Comerre exhibits two good portraits, especially that of a young blonde lady in a ball dress. All the best qualities of M. Morot are to be recognised in a portrait of a young lady in white satin, a work of very distinctive character. M. Pille exhibits an excellent portrait of M. Vayson, the painter, in his studio, full of various æsthetic necessaries carefully painted. M. Jacomb-Hood, who has studied under M. Laurens, sends a very interesting portrait of a young girl, whose delicate beauty is finely contrasted with the deep mourning dress she wears. We may note also a very good portrait of M. Mounet-Sully in the part of *Hamlet*, by M. Chartran.

Naturally, in this rapid survey we have had to pass over entirely many more or less able works, the enumeration of which would have occupied too much space, but which go to swell a total of good work which renders this *Salon* superior to that of last year. The sculpture exhibits also include some remarkable works, to be noticed hereafter.

OBITUARY.

Mr. William Longmire.—On the 11th inst., in his seventy-fifth year, died Mr. William Longmire, senior partner in the firm of Longmire & Burge. One who knew him well writes:—"As a builder, few men ever enjoyed a higher reputation for sound and good work, or retained in the same degree the unbroken confidence of his customers. He was eminently a man of thought, and there were not wanting some professional men who would gladly avail themselves of his sound judgment, the result of a life-long and varied experience. By those acquainted with him in business life, he will long be remembered for the genial courtesy of his manner and the almost inexhaustible fund of anecdote and humour which ever lent an air of pleasantness to all personal transactions." His funeral was attended by almost all the *employés*, amidst ample evidence of sincere and deep regard.

THE ARTISTS' GENERAL BENEVOLENT INSTITUTION.

THE seventy-second anniversary dinner of this institution was held on Saturday last at the Freemasons' Tavern, under the presidency of the Right Hon. E. Stanhope, M.P. Among those present were Sir J. Millais, R.A.; Mr. W. P. Frith, R.A.; Sir J. Gilbert, R.A.; Sir J. Fowler, Sir C. Mills, Mr. J. Pettie, R.A.; Mr. B. W. Leader, R.A.; Mr. J. Barlow, R.A.; Lord Crewe, Baron de Stern, Mr. Henry T. Wells, R.A.; Mr. J. Oldham Barlow, R.A.; Mr. Eyre Crowe, R.A.; Mr. H. Moore, R.A.; Mr. Oscar Wilde, and Mr. Comyns Carr. The Chairman, proposing the "Artists' General Benevolent Institution," dwelt upon the difficulties attending the pursuit of any of the arts and professions in this country. No matter what branch they entered upon, great obstacles had to be overcome, but the difficulties in the way of the artist's calling appeared to him particularly great. He could imagine the struggles for public recognition, and the bitter disappointments they had often to experience. In many cases the hand of sympathy held out at the proper moment would save from utter ruin a clever but struggling artist, and it was for an institution which gave such assistance in a most unostentatious and economical manner that he appealed for support that night. The toast of the "Royal Academy," also proposed by Mr. Stanhope, was responded to by Mr. Wells, R.A., in the unavoidable absence of Sir Frederic Leighton. The Treasurer, Mr. P. Hardwicke, announced the receipt of subscriptions amounting to 2,220*l*. He also stated that the late Mr. Cousins, R.A., had bequeathed 5,000*l*. for the benefit of the Institution. One hundred and sixty-one applicants had been relieved during 1886 with the sum of 3,011*l*. Since the establishment of the Institution in the year 1814, 4,644 donations have been granted amounting in the aggregate to 78,386*l*.

SANITARY LEGISLATION CONFERENCE.

OUR readers will remember that this Conference was convened by the Sanitary Assurance Association to consider and report upon the Sanitary Registration of Buildings Bill, and that the following institutions appointed representatives as members of the Conference, namely, the Royal Institute of British Architects, the Surveyors' Institution, the Public Health Medical Society, the London Sanitary Protection Association, the Association of Municipal and Sanitary Engineers and Surveyors, and the Royal Institute of Architects of Ireland. At its first two meetings the principle of the Bill was unanimously approved, and six out of the seventeen sections of which the Bill consists were, with amendments, agreed to.

The third meeting of the Conference was held at the rooms of the Sanitary Assurance Association, 5, Argyle-place, Regent-street, W., on Monday afternoon, when the President, Sir Joseph Fayrer, K.C.S.I., M.D., F.R.S., again presided. After the confirmation of the minutes of the second meeting, and the reading of correspondence, the Conference resumed its consideration of the details of the Bill, Section 7 of which was in part agreed to at the last meeting. Mr. Mark H. Judge, A.R.I.B.A., proposed, and Mr. H. D. Appleton, F.R.I.B.A., seconded, that the Institution of Surveyors be added to those mentioned in Clause 1 of the section. This was agreed to, as were also two other amendments, one substituting five years for three years in Clause 2, and the other adding to Clause 3 a provision that the certifying officers of the Sanitary Associations should be qualified under the Act. The discussion of this section was a protracted one, in which the Chairman, Mr. C. C. Lacaita, M.P., Mr. David Finlay, Mr. Joseph Smith, M.R.C.S., Mr. H. Leonard, C.E., Mr. Charles Jones, A. Inst. C.E., and Mr. Judge took part. Ultimately the section was agreed to as follows *nem. con.*:—

"7. The Local Government Board, or corresponding authority, shall issue Licenses in Sanitary Practice to the following persons and Corporations, that is to say (1) Members of the Royal Institute of British Architects, Members of the Institution of Civil Engineers, Members of the Royal Institute of Architects of Ireland, Members of the Association of Municipal and Sanitary Engineers and Surveyors, and Members of the Surveyors' Institution, who are registered in accordance with this Act as qualified in Sanitary Practice. (2) Architects and Civil Engineers who have been in practice three years at the passing of this Act and who shall before January 1, 1890, prove to the satisfaction of the Local Government Board that their practice as Architects or Civil Engineers has been a *bonâ fide* one, and has included the designing and carrying out of constructive sanitary works. (3) Sanitary Associations incorporated by license of the Board of Trade provide that their certificating officers be registered as qualified in sanitary practice in accordance with this Act. (4) Medical practitioners registered as qualified in sanitary science. (5) Persons who are Medical Officers of Health at the passing of this Act. (6) Persons who at the passing of this Act hold appointments as Engineers or Surveyors under the Public Health Act, provided they are members of one of the Institutions mentioned in subsection 1 of this section. (7) Such other persons as the Local Government Board or corresponding authority may consider qualified after examination."

Considerable discussion also took place on the 8th and 9th sections, but they were agreed to with verbal amendments.

The Conference then adjourned till Monday next at two o'clock.

The Disinfection of the London Sewage.—At the meeting of the Metropolitan Board of Works announced for Friday, the 20th inst., the Works and General Purposes Committee will present a report recommending the Board to advertise for a quantity of manganate of soda, not exceeding 6,000 tons and not less than 2,000 tons, to be delivered in such quantities and at such places and times as the Board may from time to time require. Mr. E. Rider Cook has given notice that he will move, as an amendment:—

"That no further purchases of manganate of soda be made until Sir Henry Roscoe shall have reported upon the advisability of using it in the sewers, and that it be referred to the Works and General Purposes Committee to consider if some less costly disinfecting agent cannot be obtained for use at the outfalls in the event of the condition of the river Thames becoming such as to render the use of disinfectants desirable in connexion with the discharge of sewage."

Proposed Cathedral for Brisbane.—The Bishop of Brisbane suggests, in a letter written to the *Brisbane Courier*, that a cathedral shall be erected for the diocese of that city, to serve as a memorial to the Queen's Jubilee. The letter has been received with general approval, and a meeting is about to be held in favour of the movement.

Illustrations.

BRANCH BANK OF ENGLAND, FLEET-STREET.

THIS building is being erected by the Bank of England at the corner of Bell-yard and Fleet-street (partly on the site of the famous "Cock" Tavern) to take the business now carried on in certain rooms allotted for the purpose in the Law Courts.

It will contain the usual arrangements of a bank on the ground-floor and basement, and a residence for the Agent on the upper floors.

The entrance to the bank will be in Fleet-street; that to the Agent's house in Bell-yard, which will be widened considerably.

The rusticated base shown on the drawing is of Aberdeen granite. At the nearest angle the height of this base is 11 ft. from the pavement, which it is necessary to state, as the figures, having been unfortunately drawn much too large, give a false idea of the scale of the building.

The superstructure will be of Portland stone, polished granite being used for the columns and for the panels of pilasters and spandrels of arches.

The building will be fireproof throughout, Messrs. Lindsay's system being used for floors and roof.

The contractors are Messrs. Dove Bros., who are carrying out the building from the designs and under the superintendence of the architect, Mr. A. W. Blomfield, M.A.

The drawing from which the illustration is taken is at present hung in the Architectural Room at the Royal Academy.

SUNDERLAND MUNICIPAL BUILDINGS.

THE illustration which we give of this building is from a drawing now in the exhibition of the Royal Academy. Mr. Brightwen Binyon, F.S.A., of Ipswich, is the architect, his design having been selected in a competition held in the spring of 1886.

The contract has been let to Messrs. E. H. & S. Allison, of Sunderland, for 25,120*l*. The architect's estimate sent in with the competitive design was 25,500*l*. Mr. John Robinson has been appointed clerk of works. Mr. Frank Ashwell, of Leicester, will supply the heating and ventilation. The heating will be effected by means of low-pressure steam, each room being supplied with coils and fresh air inlet, and ventilated by means of extraction flues carried into an upright shaft in the tower.

The floors generally will be constructed of Homan & Rodgers's patent fireproof flooring, and the walls of the court-yards and areas for light will be faced with the Farnley Iron Company's glazed bricks.

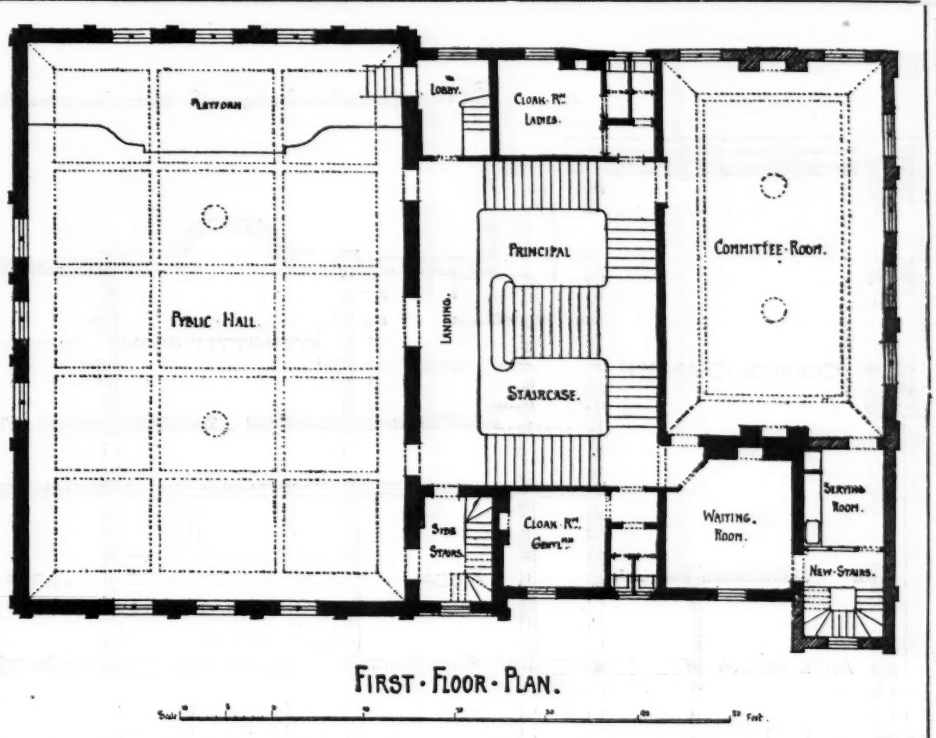
The walls externally will be faced with Prudham stone, and the entrance hall and main staircase will be worked in Dennick stone with columns of polished red granite.

The building is now in course of erection, and the foundation-stone will, it is anticipated, be laid on "Jubilee Day." The work is to be completed in the course of two years.

ADDITIONS TO ST. SEPULCHRE'S SCHOOLS, NORTHAMPTON.

THESE additions consist of an infants' room, 45 ft. by 19 ft., and a babies' room, 25 ft. by 17 ft. 6 in. (giving together gallery accommodation for 160 children), with a hat and cloak lobby, 8 ft. wide, between the two rooms, which also communicates with the existing schools. A passageway, 5 ft. wide, is preserved on the north side to give a separate entrance for the infants, and as an approach to the playground and offices at the back. The old school being placed almost in the centre of a rather limited site, necessitated the addition being brought up to the boundary. Funds did not permit of the front fence being included in the contract. The front walls are built of yellow Duston stone lined with brick, the dressings of hard brown. All the floors are of wood block. Both rooms have fresh-air ventilating stoves, and gratings in the ceiling communicate by zinc tubes with a Kershaw's extract ventilator.

The works were carried out last summer by Messrs. Reynolds & Son, builders, Northampton, for a total cost (including some slight additional works to the old building) of 476*l*. 15s., under the superintendence of Mr. Thos. Garratt, architect, London.



Plan of Hampstead Vestry Hall, showing recent Additions.—Mr. Frederick Mew, Architect.

BUSINESS PREMISES AND RESIDENCE, WIMBLEDON.

THESE buildings were erected at the corner of Hill-road and Woodside for Messrs. D. Thomson & Sons, florists. The large conservatory showing at the front is the general entrance for customers, and leads to the flower-room and offices, whilst another entrance is provided in Woodside for the seed-shop and general sale-room. In the rear, and communicating with the business portion, is the house, consisting, on the ground-floor, of dining and drawing rooms, kitchen, scullery, &c.; and upstairs are six bedrooms, bath and water-closet, with a large lumber-attic in the roof. The materials are red brick and tile, with rough-cast to upper story, and, with the picturesque surroundings, make a pleasant group. They were carried out by Mr. W. Harmer, of Wimbledon, at a cost of about 2,200*l*., from the plans and under the superintendence of Messrs. Potts, Sulman, and Hennings, architects.

VESTRY-HALL, HAMPSTEAD, SHOWING THE RECENT ADDITIONS.

THE alterations and additions to the Vestry-hall, Hampstead, which, together with the finishing and decoration of the entire building, were completed last year, consist mainly of the erection of a new committee-room in the rear of the existing structure on the upper floor, with a staircase and serving lobby adjoining. A retiring-room for musicians and others has been provided over the ladies' cloak-room and closets, approached from the lobby next the public hall, and also extended lavatory accommodation in connexion with the Board-room on the ground-floor.

Messrs. Gould & Brand, of High-street, Camden Town, were the contractors for the whole of the works, which, including the decoration of the principal apartments, have been executed from the designs and under the superintendence of Mr. Frederick Mew, architect.

CHURCH OF ST. JOHN THE BAPTIST (R.C.), BRIGHTON.

THE church was erected in 1835 on the model of St. Mary's, Moorfields, with a portico *in antis* as the feature of the exterior, the interior having a bold cornice, but an otherwise flat and unrelieved ceiling, 35 ft. 6 in. in width; there were, however, a handsome marble altar and font; a fine altar-piece in statuary marble with the Baptism of Our Lord, by Carew; and other sculpture, notably the monument to Mrs. Fitzherbert, who is buried near tothe monument. A sanctuary, Italian in character, with side chapels, was added a few years since, designed by the late Gilbert Blount; and the side windows have been filled with good stained glass by Messrs. Lavers & Westlake.

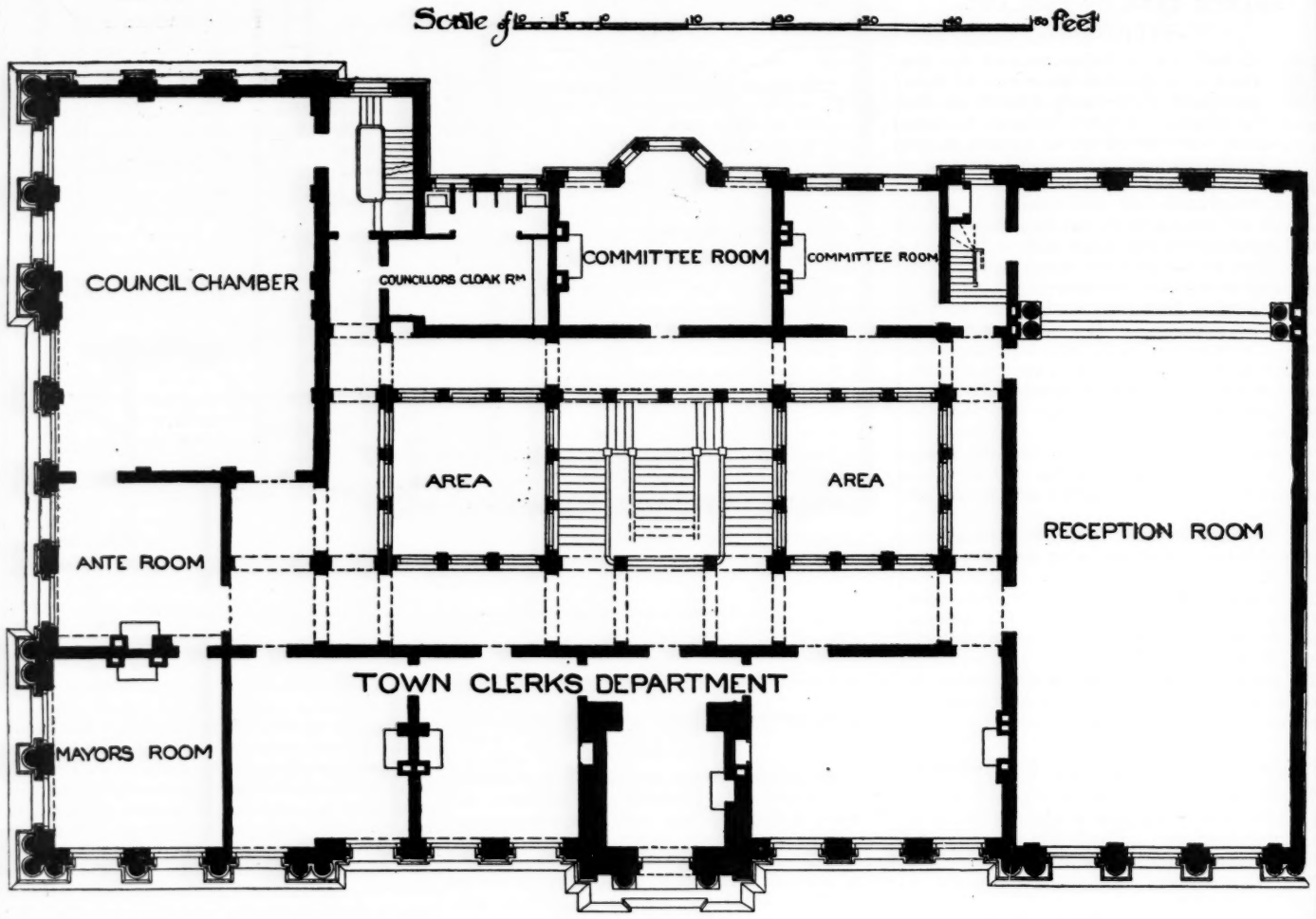
The constructional roof of the nave, hitherto concealed by the flat ceiling, has very substantial queen-post trusses, and it is now proposed to remove the ceiling, to case up and otherwise decorate the timbers, and by a few other carefully-designed modifications, to which the present construction lends itself, to gain a regular and interesting architectural effect for the interior, all the old constructional and monumental work being preserved intact.

The columns of the portico are constructed of brickwork cemented, and are dilapidated, besides being much in the way, as only the central intercolumniation is wide enough for ingress; it is therefore proposed to remove them, and to substitute an enriched arch. with a sculptured tympanum over the double doorway; and, as the interior is dull in effect, to brighten it by raising the windows in the façade, and piercing the pediment by a large circular window. The projected work also includes the bell-tower shown in the drawing, the lower part of which is planned as the baptistery, in which the present marble font and the marble group of the Baptism, now very badly lighted, will be placed.

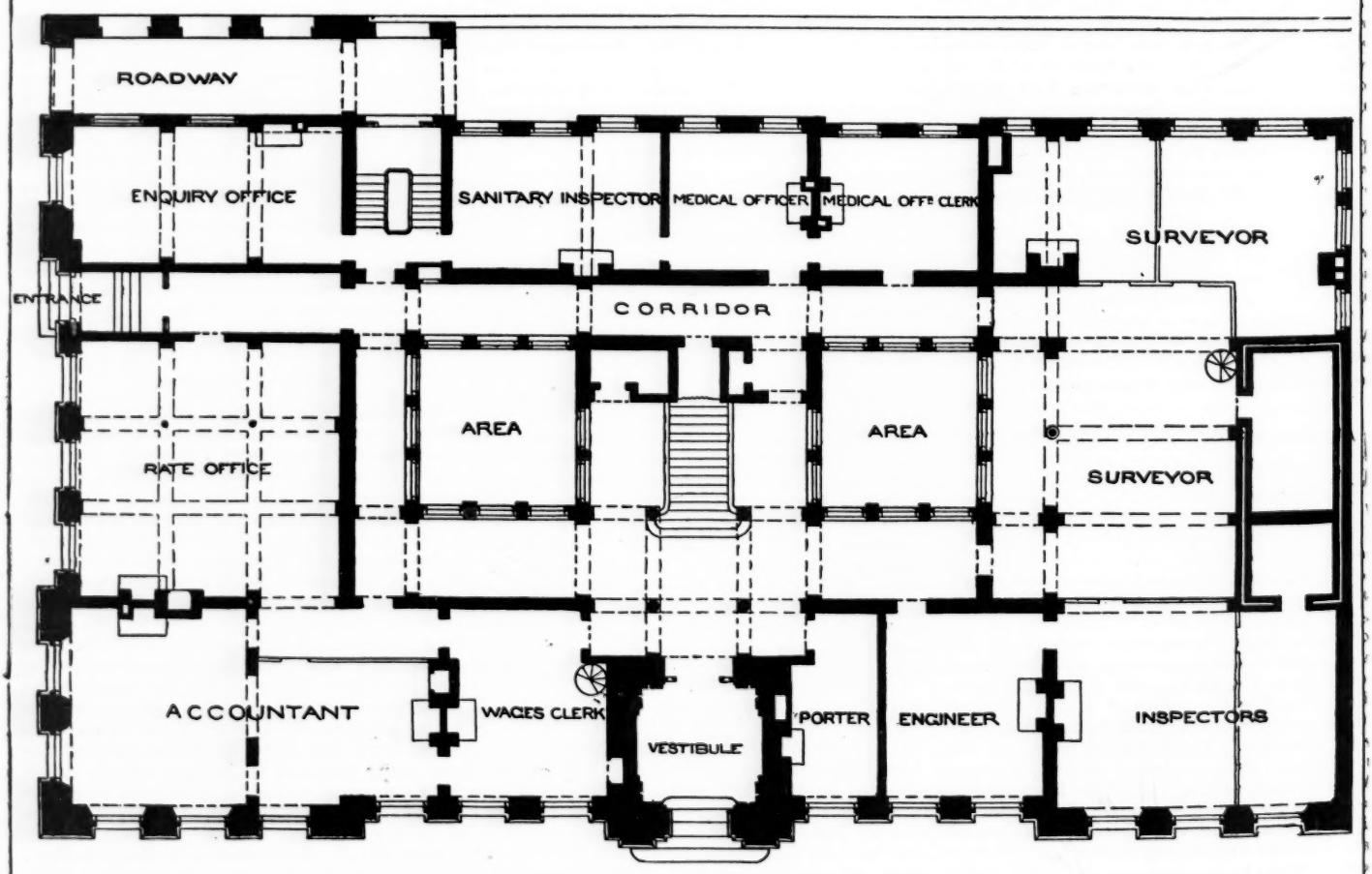
The design for the whole of the work has been prepared by Mr. S. J. Nicholl, architect, London. The illustration is from the drawing exhibited at the Royal Academy this year.

Proposed New Square at Sydney.—The Government of New South Wales is considering a scheme which has been submitted to it proposing to transform a block of land in Sydney into a fine square. The site is on the west side of George-street, between the Town-hall and Market-street, on which now stand the Central Police-court and Markets. It is understood that the Minister of Justice is quite prepared to hand over the site of the police-court on condition that the corporation at the same time gives up that of the markets, and in view of the fact that the City Council is to be granted 8,000*l*. annually for ten consecutive years, provided they will give their support to the proposal, there ought to be no difficulty in carrying out the project. In the event of the land being obtained the square will be called the Centennial-square, in commemoration of the hundredth anniversary of the foundation of Sydney.

Edinburgh Architectural Association. It has been decided by the President (Mr. Hippolyte J. Blanc) to change the subject of the competition in which he has offered prizes, "Designs for Workmen's Dwellings," to "Suggestions for the Restoration of Falside Castle" (near Musselburgh). The competition is open to all members of the Association who are not more than twenty-five years of age.



FIRST FLOOR PLAN.



GROUND PLAN.

Sunderland Municipal Buildings.—Mr Brightwen Binyon, Architect.

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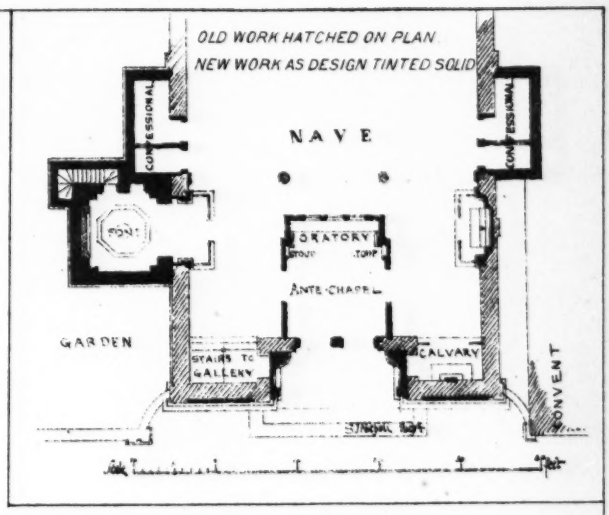
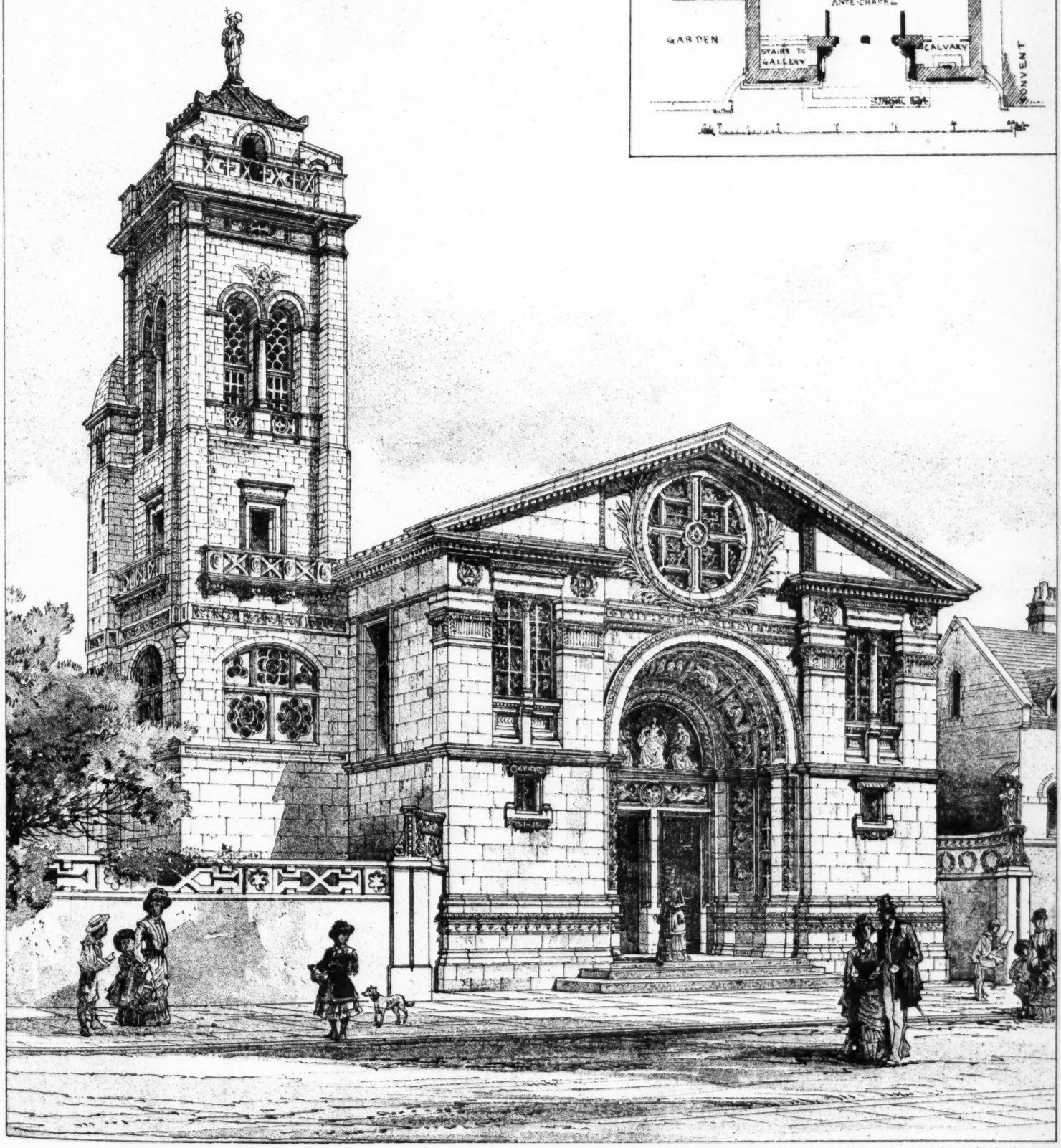
ADDITIONS TO THE VESTRY HALL, HAMPSTEAD.—Mr. Frederick Mew, A.R.I.B.A., Architect.





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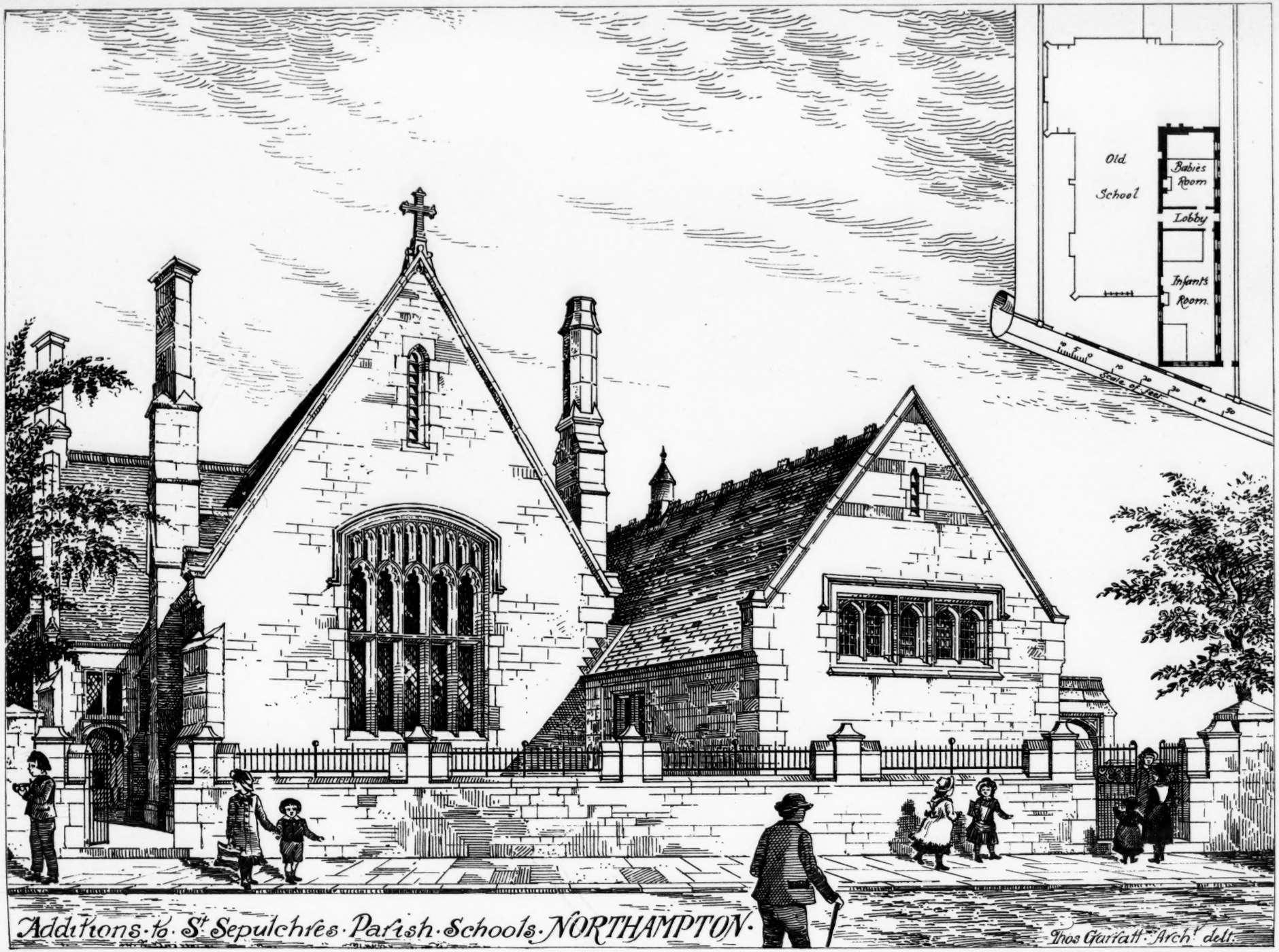
CHURCH OF ST. JOHN THE BAPTIST, BRIGHTON.—MR. S. J. NICHOLL, A.R.I.B.A., ARCHITECT.



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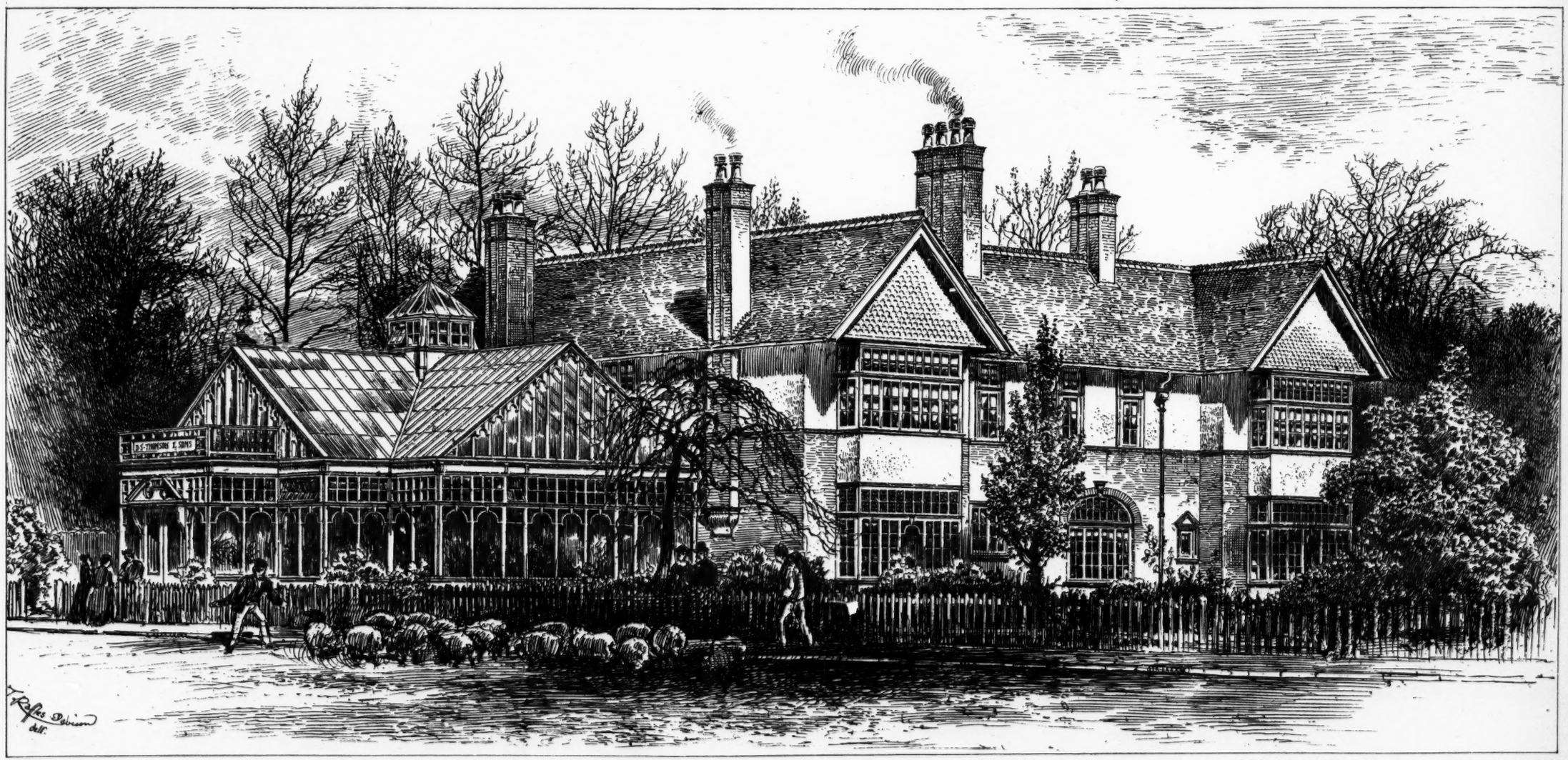

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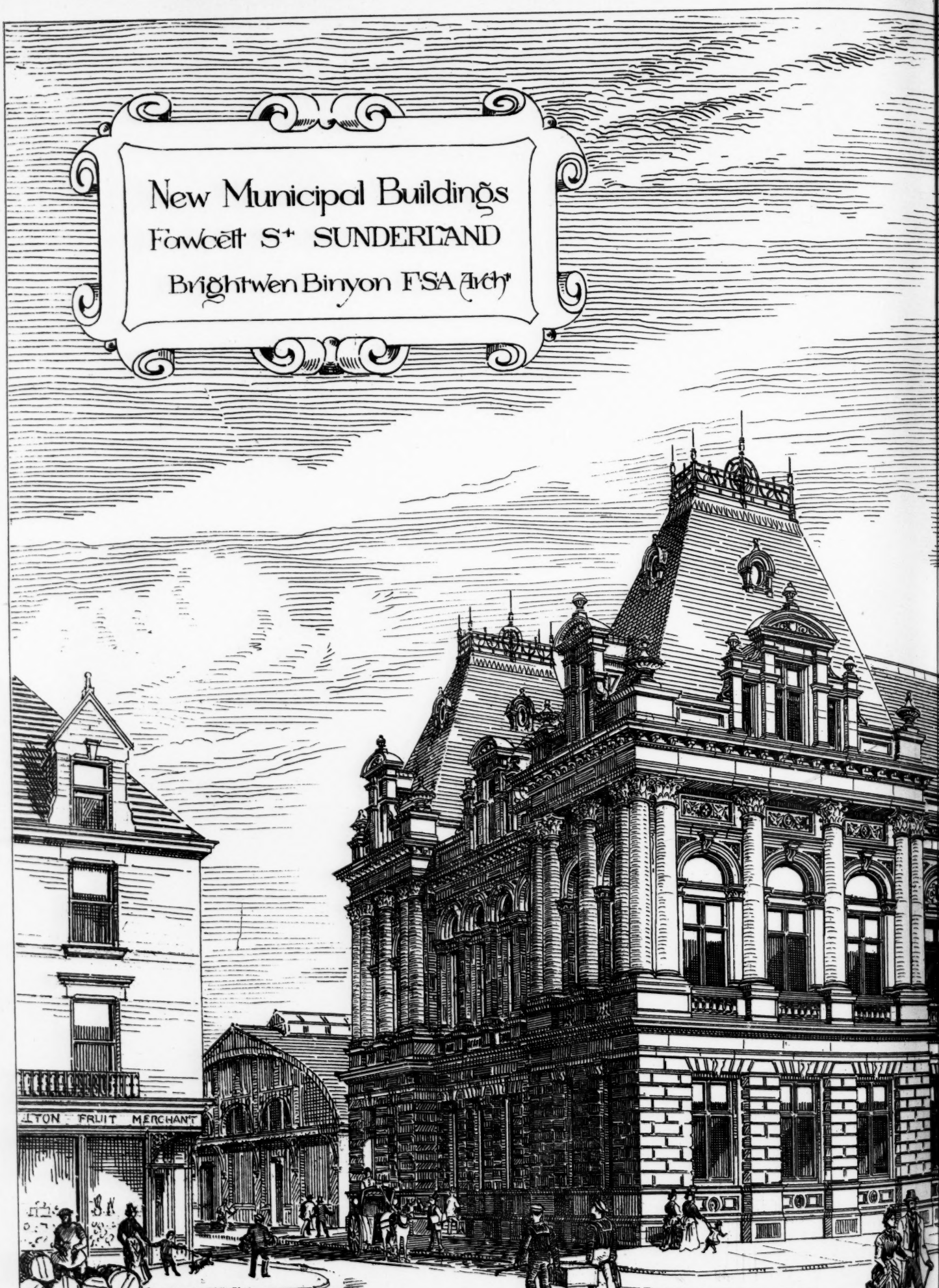
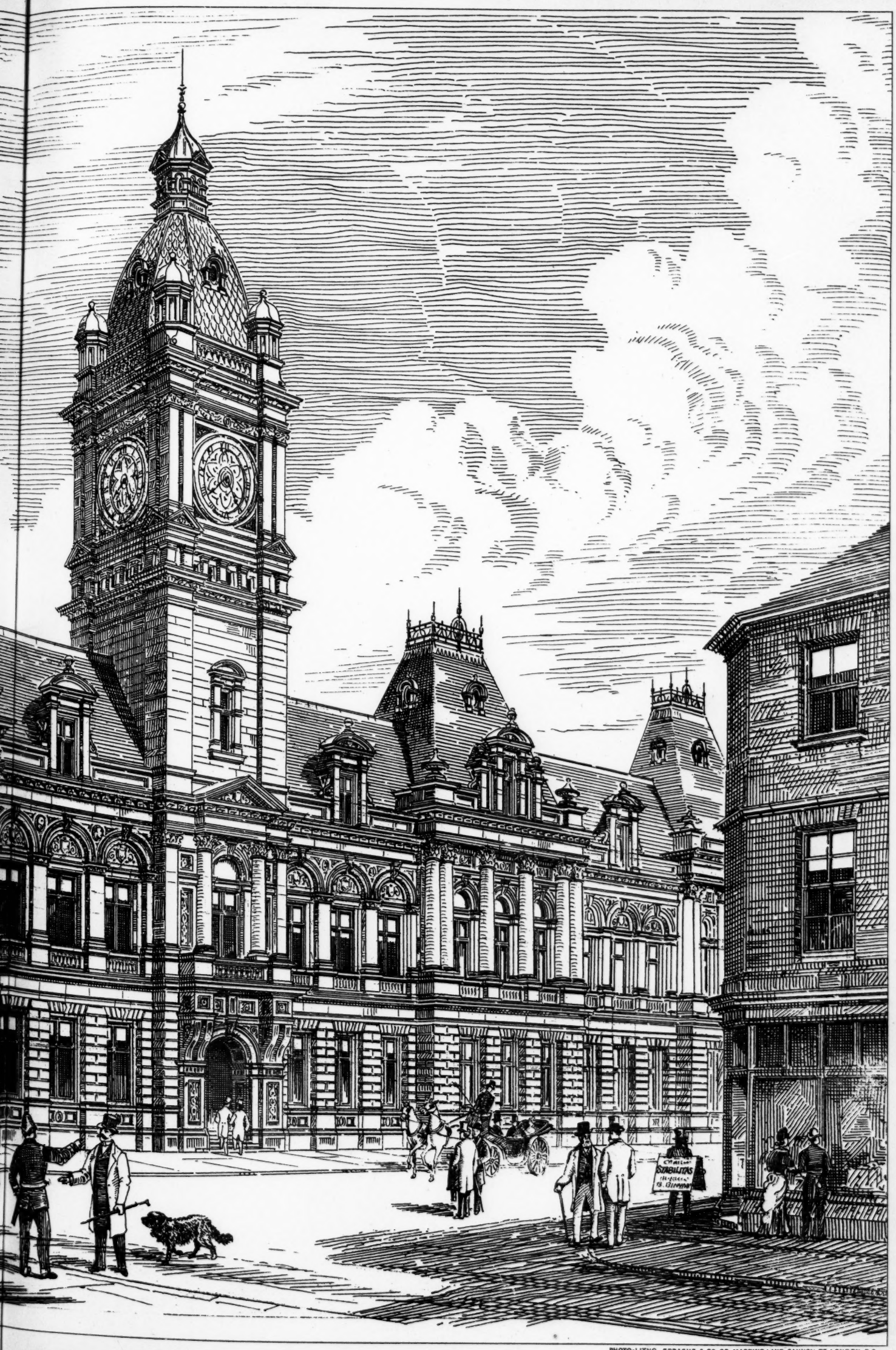
BUSINESS PREMISES & RESIDENCE, WIMBLEDON.—Messrs. Potts, Sulman & Hennings, Architects.


New Municipal Buildings
Fawcett St. SUNDERLAND
Brightwen Binyon F.S.A. Arch.
TON FRUIT MERCHANT



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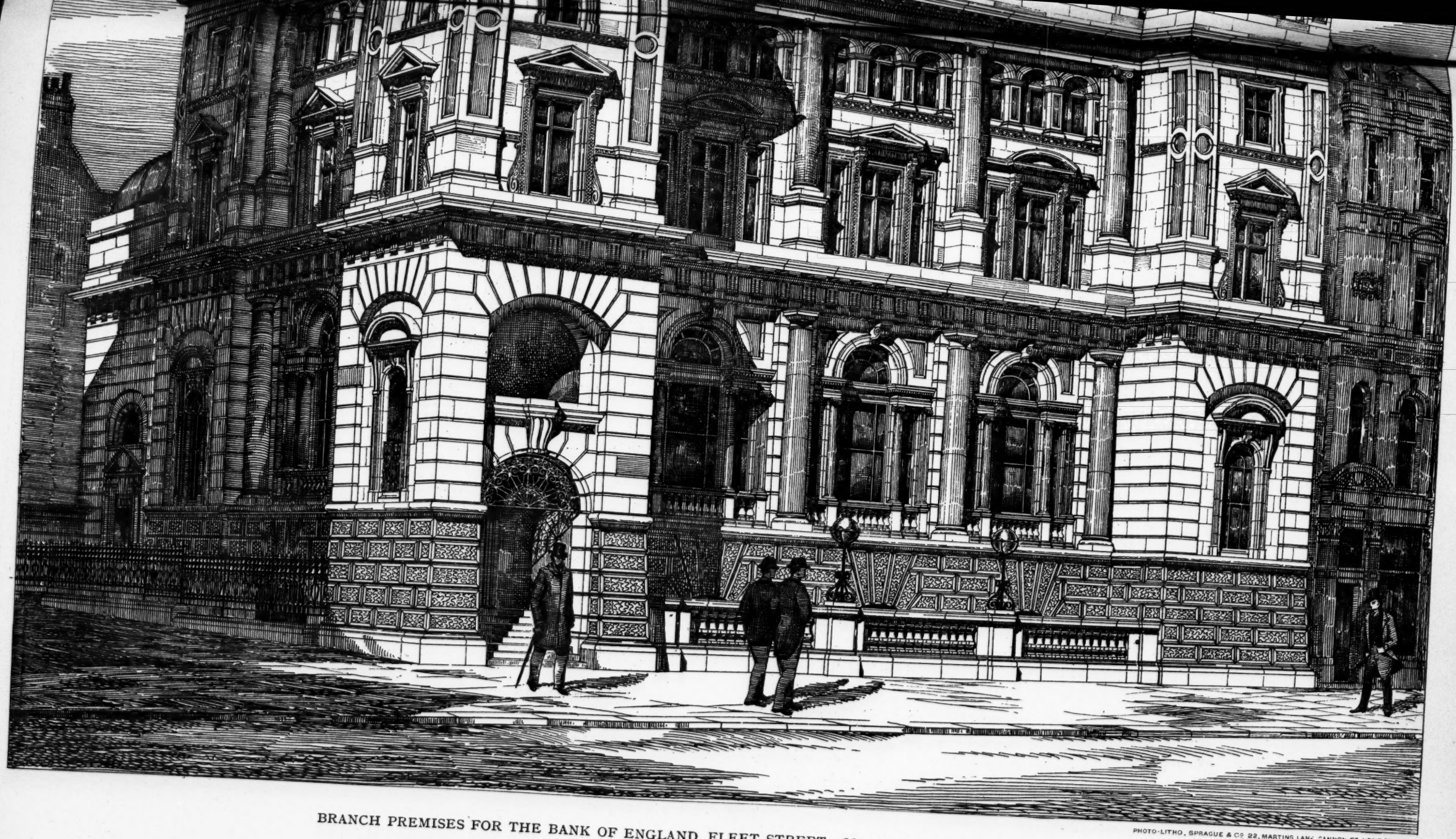


BRANCH PREMISES FOR THE BANK OF ENGLAND, FLEET STREET.—Mr. A. W. Blomfield, M.A., Architect.

PHOTO-LITHO, SPRAGUE & Co 22, MARTINS LANE, CANNON ST, LONDON, E.C.

THE NEW CLUB-HOUSE FOR THE NATIONAL LIBERAL CLUB.

THIS new building, visited by the members of the General Conference of Architects the other day, is fast approaching completion, and will be formally taken possession of by the members of the Club on Monday, June 20, in time for the Jubilee celebrations. By the kindness of the architect, Mr. Alfred Waterhouse, R.A., and of the Secretary to the Club, Mr. William Digby, C.I.E., we are enabled to give plans of six of the floors, together with such descriptive notes of the building as we have been able to get together within a comparatively limited space. Although the plans we give are of necessity very considerably reduced, they will suffice to make clear our description. We may mention here that in the *Builder* for May 9, 1885, we gave a view of the Club-house, together with the plan of the upper ground-floor. The plan of this floor has not been departed from in execution, although one or two of the apartments have been allocated to different uses than was intended two years ago; therefore, for convenience, we repeat the plan now, showing the allocation of the rooms as finally decided upon. We hope to be able to give views of some of the interiors soon after the Club-house has been opened. Without further preface we will proceed to describe the new building somewhat in detail.

With regard to the foundations, although the Club-house stands on what was the foreshore of the river at this point before the Embankment was made, very little difficulty was experienced. It was found that the Embankment wall, executed by Mr. Webster for the Metropolitan Board of Works, and carried down into the blue clay, formed a complete cofferdam, and quite shut off the tidal water from the ground, whatever might be the height of the tide. The foundations of the building are carried down some 25 ft. below the level of the street pavement in Whitehall-place, and rest on solid masses of concrete splayed or stepped at the sides in order to obtain a wide and solid bearing. These footings, which are of Portland cement concrete of extra good quality, rest on a hard and compact bed of yellow sand and gravel just above the level of the ground-water. In order to get down to this depth it was necessary to remove, firstly, a layer, about 10 ft. thick, of made ground and soft stuff; secondly, a layer, about 7 ft. thick, chiefly the residue of alluvial mud; and, thirdly, a layer of grey sandy loam from 3 ft. to 5 ft. thick. The brick footings of piers and walls, which sustain great superincumbent weight, are of hard gault bricks (supplied by Mr. Joseph Hamblet) set in lias lime mortar.

Having said thus much as to the foundations, we will briefly describe the chief features of the building which they support, beginning with the wine-cellar, which really forms a sub-basement, and is the lowest apartment in the building, with the exception of the sub-basement of the tower, which is on the same level and will be utilised as a beer-cellar, approached by one of the two staircases leading to the wine-cellar. The floors of the wine and beer cellars are about 17 ft. below the pavement level of Whitehall-place. The wine-cellar is 97 ft. long, with a general width of 35 ft., and is about 8 ft. 6 in. high from floor to ceiling. In recesses along the sides some of the wine-bins are placed, but by far the greater number of these are arranged in two double tiers erected along the centre of the cellar in the direction of its greatest length. These bins, of which there are upwards of 400, are built of brick and stone, the side partitions and back division walls being of brick, while the shelves are of York stone flags. These two-double-ranges of bins along the centre of the wine-cellar are built right up to the underside of the ceiling, and, indeed, serve a secondary purpose, that of giving support to the floor of the Smoking-room above.

Ascending to the basement-floor, the general level of which is about 12 ft. below Whitehall-place, the most important apartment to be noticed is the Smoking-room, which has its floor only 8 ft. 6 in. below the level of Whitehall-place. (See plan of basement floor.) It is situate over the wine-cellar, and is nearly 100 ft. long by 35 ft. wide, not reckoning the space gained by the two large bay windows facing Whitehall-place, nor the deep recess on the other side of the room. In this recess, by the way, is a fireplace, and there will be two other fireplaces in this room, one at each end. The room is about 23 ft. high from floor to ceiling. In addition to the three fireplaces just mentioned warmth will be supplied, when necessary, by means of steam-heated coils, some of which will rise through the centre of the floor and be concealed by ottomans. Ventilation will be provided for by inlets for fresh air at the skirting level, as well as at a height of some 10 ft. or 12 ft. This fresh air will be forced into the room in regulated quantities at each aperture, and will be warmed when necessary. These arrangements are referred to further on. Apertures in the ceiling and elsewhere at the top of the room will be provided for extraction purposes. These apertures lead into trunks and upcast flues or shafts, the extractive action being maintained and accelerated by means of steam-heated coils. The lighting will be by means of electricity, on the Swan-Edison system, as hereafter described. In the large Smoking-room, of which we are now speaking, the lamps will be suspended a few feet below the level of the ceiling, but in some other apartments the lights will be nearer the ceiling. Architecturally, the interior of the smoking-room is very effective. The ends are splayed or canted at each side, with fireplaces in the centre, as before mentioned. These canted ends, the two large bay windows, and the deep fireplace recess on the opposite side of the room, are emphasised by projecting piers and detached columns,—the latter being constructive as well as decorative, for they stand well away from the walls, and diminish the bearings of the girders which take the weight of the floor above, besides lightening the load on the walls. These columns consist internally of wrought-iron stancheons, built up in sections, on Lindsay's principle. The ironwork is surrounded by a core of coke-breeze concrete, which, while being light in weight, will serve to protect the ironwork in case of fire. This core of coke-breeze is put on to the columns by means of moulds specially contrived so as to obtain correctness of diameter and entasis. It also affords an admirable "key" for the Burmantofts faïence work with which the columns, in common with the greater part of the wall-surfaces and certain portions of the ceiling, are decorated. It may here be mentioned that, as will be seen by the plans, detached columns of this kind, serving the double purpose of construction and decoration, are to be found in the Dining-room, Grill-room, Reading and Writing Rooms, and Gladstone Library, the design and colour of the faïence and tiles differing in each apartment. The floor of the Smoking-room, like the floors of all the larger apartments of the Club-house, is of fire-proof construction, being arched in concrete over the wine-cellar, in which respect, however, it is exceptional, as the floor construction generally is on Lindsay's system of steel decking, hereafter referred to The floor surface of the Smoking-room is of Ebner's marble mosaic work. The three mantel-pieces in this room are of Hopton Wood stone, with walnut over-mantels. The doors, sashes, and other joinery in this room are in walnut, well designed and admirably executed. Before leaving the Smoking-room, we may mention that it is served from a bar contained in the basement of the tower, a floor above the level of wine and beer cellars. To mention the other apartments in the basement, immediately beneath the Club entrance and vestibule is a large dressing-room for the men-servants, with bath-rooms adjacent. Lighted from the open area fronting Whitehall-avenue are two large bedrooms or dormitories for men-servants. Adjacent to these are the Steward's office and the Receiver's office, opening on to a corridor leading to the tradesmen's and servants' entrance. At the end of this corridor (which is bounded on one side by the party-wall between the club-house and the residential-chambers known as Whitehall-court) are lifts for stores and provisions. Adjoining these lifts is the men-servants' dining-room, served by two more lifts, and well lighted from the large open area between the buildings known as Whitehall-court. Still nearer the river, and within the main walls of the building, at its south-east angle, is the boiler-room. Close by, but in the basement of the terrace which overlooks the gardens and the river, are the dynamo and engine rooms. At this end of the terrace is the open area for the admission of fresh air for the supply of the building. It will be drawn in by means of a Blackman air-propeller, and conducted by means of air-trunks to the various parts of the building, being warmed when necessary by steam coils on Mr. Phipson's system. Of the heating and ventilation arrangements generally we give a description further on. Northward of the boiler-room, and divided therefrom by a corridor, is large storage space for members' luggage, &c. This space extends up to the north-east angle of the Smoking-room. In an irregularly-shaped space, surrounded by the various apartments and offices which we have described, is disposed the bottom flight of the grand staircase, which latter is planned within an oval, 42 ft. by 31 ft., and brought down to this level from the entrance vestibule for giving access to the Smoking-room. In the lower part of this staircase further storage-space is obtained. Before leaving the basement floor we may add that, in the basement of the terrace, and lighted by a large bay window at the north-east corner, is another dormitory for men-servants.

Ascending to the next floor, namely, the "Lower Ground Floor" (see plan), we find ourselves on a general level with Whitehall-place. We may here mention that the Club-house has a frontage of about 190 ft. towards the river and Embankment gardens; a frontage of nearly 160 ft. to Whitehall-place, and a frontage of about 94 ft. to Whitehall-avenue. The party-wall dividing the Club-house from Whitehall-court is 1.7 ft. long. The Club entrance is at the angle formed by the junction of the new street known as Whitehall-avenue with Whitehall-place, and consists of a boldly-projecting and sculptured doorway leading into a vestibule and hall some 15 ft. wide, leading direct to the grand staircase, of which more hereafter. The sculptured figures surmounting the doorway are by Mr. Christopher Smith. Most of the other carved work has been done by Messrs. Daymond & Son. On the left of the vestibule is a small reception lobby, and on the right is the porter's office, with his bed-room below, reached by a circular staircase. Further on, on the right-hand side of the entrance-hall, is a large waiting-hall, accessible to the porter's office from two points. Adjoining this waiting-hall, and lighted from Whitehall-avenue, is the Conference-room, 38 ft. by 35 ft. Accessible from a corridor leading to the grand staircase are the members' hat and coat rooms, retiring-rooms, and lavatory. On the opposite side of the corridor just named are ranges of bath-rooms and dressing-rooms for members. On this floor of the building, and immediately beneath the terrace walk overlooking the Embankment gardens, are a series of billiard-rooms and card-rooms, some of which are top-lighted. At the north-east corner of the building, a porch (shown to the right of the plan of the lower ground-floor), beneath the small detached circular belvedere on the terrace (see right-hand corner of plan of upper ground-floor) gives access to a passage leading to the staircase in the tower, which leads up to the Gladstone Library and to the members' chambers on the upper floors. The remainder of the lower ground-floor is occupied by the upper part of the Smoking-room.

We will now ascend to the "Upper Ground-Floor" by the grand staircase, which, as we have already mentioned, is elliptical on plan. It has been executed by Messrs. Farmer & Brindley, and consists of three flights of solid Sicilian marble steps, 8 ft. in width, and landings. A solid alabaster cornice runs up the whole height, on which rest pedestals, with plinths and capping of Pavonazzetto marble, and dies of alabaster, carrying columns of choice Breccia Africano, with caps and bases of cream-coloured statuary, the balustrade between having a Pavonazzetto plinth and capping, and alabaster balusters, the whole being finished on top with two arcades,—the columns, caps, and bases of this being of the same material as the others, with alabaster arches. The lower part of the wall is lined with alabaster slabs on a Pavonazetto plinth, the architraves, arches, and soffits to doorways being in the latter material. The principal apartments on the upper ground-floor (see plan) are the Dining-room, 110 ft. long by 38 ft. wide, facing the river and overlooking the terrace which has before been mentioned.* This is the largest apartment in the building. At the north-east end access is obtained, through a door on the

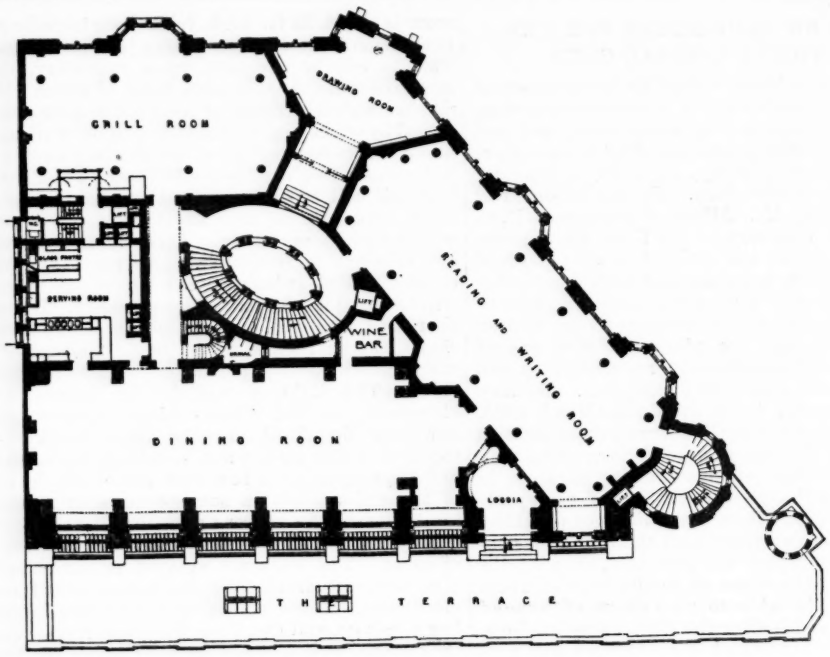
* From this terrace, but not shown on the plans, a short flight of stairs,' just by the first pier from the left-hand corner, leads down to the corridor on the lower ground-floor.

right, to a loggia opening on to the river terrace, and through a door on the left to the large Reading and Writing Room, which faces Whitehall-place, and is of the same size as the large Smoking-room below it. Over the entrance-hall and vestibule, and approached from the grand staircase, is the Drawing-room. Next comes the Grill-room, overlooking Whitehall-avenue. Between the Grill-room and the Dining-room is a corridor for members, and a large serving-room lighted from the area of Whitehall-court. Over this serving-room is a mezzanine containing retiring-rooms, lavatories, &c.

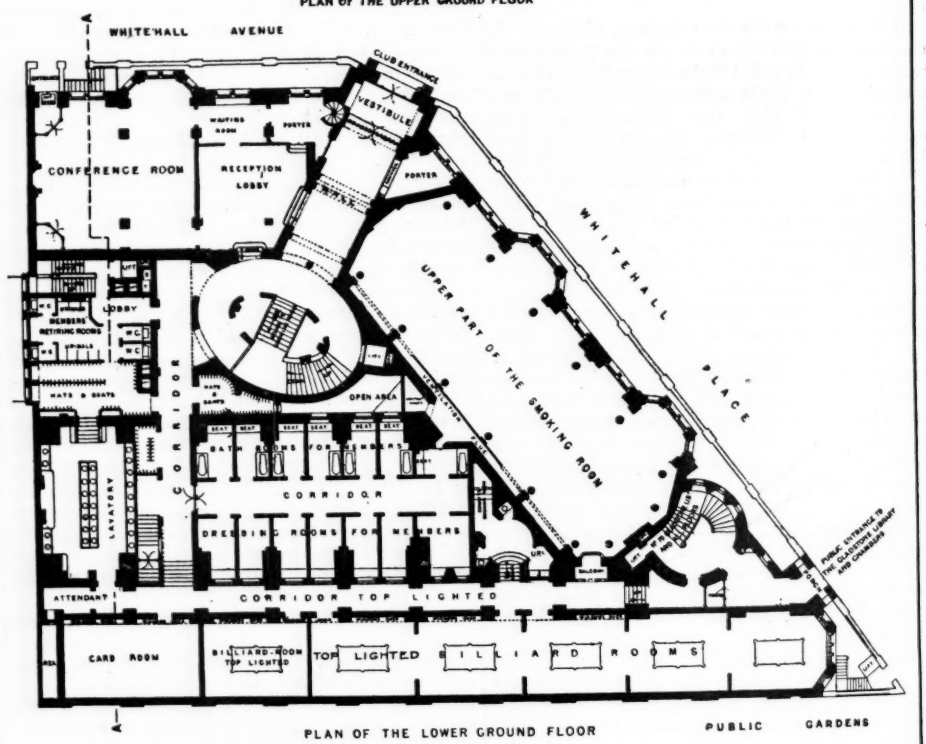
The principal apartment on the first floor (see plan) is the Gladstone Library, which is over the Reading and Writing Room, and of the same size as the latter and the Smoking-room, viz., about 97 ft. long, 35 ft. wide (exclusive of bays), and 24 ft. high. This Library will be approached from the grand staircase at one end and from the staircase in the tower at the other end. It will also open into the Smokers' Reading and Writing Room, which will overlook the river. This apartment is about 72 ft. long, and at one end has a large open loggia giving access to a balcony. Adjoining this room, and also overlooking the river, will be a private dining-room, 38 ft. by 35 ft. Behind this room will be another serving-room, and beyond that, and looking into Whitehall-avenue, will be the Committee-room, also available as a dining-room. Next will come the clerks' office and the Secretary's room, and, over the Drawing-room, the Members' Private Smoking-room. Over the service-room is a mezzanine giving more retiring-room and lavatory accommodation, and over the clerks' office is an additional room for clerks if needed. The grand staircase ends at the level of the first floor, and is lighted by a large lantern light, leaving the whole of the large internal area above it available for lighting the members' chambers and the domestic offices on the upper floors.

The second floor (see plan) contains about forty bedrooms, some of the larger ones having a recess, partly partitioned-off and partly intended to be curtained, for the bed. There are also bath-rooms, closets, &c. The third floor, which is almost identical in plan with the second floor, contains forty more bedrooms, besides bath-rooms, &c.; on both the second and third floors these chambers are disposed on each side of a continuous corridor running round the building, some of the chambers looking out from the three frontages, and others looking into the large inner area. On the fourth floor, however (see plan), accommodation has to be found for the kitchen, larders, pantry, scullery, &c., as well as for a number of the servants. The kitchen occupies the whole of the Whitehall-avenue frontage on this floor. The other portions of this floor are occupied as members' chambers and by servants' apartments and officers. Twenty bedrooms for members are obtained in the frontages towards Whitehall-place and the Embankment, but the servants' apartments and offices all look into the inner area, and are kept quite separate from the members' apartments by distinct though parallel corridors, approached by different stairs. The rooms on the fifth floor are, for the most part, located in the roof, and are largely devoted to storage purposes, and to bedrooms for the maid-servants. The Manager, Steward, and Housekeeper will also have their apartments here. The Manager's bedroom will be the topmost room in the tower, just below the open belvedere under the conical roof of the tower. From this belvedere, it may be remarked, a splendid view of London and its environs is to be had on a clear day. Above this open space, and beneath the slated conical roof, is an enormous tank containing about 100 tons of water, for working the hydraulic lifts, hydrants, &c. This tank will be supplied from the Chelsea Water Company's mains. It will thus be seen that the upper floors provide 100 bedrooms for members, besides kitchen and other domestic offices and servants' bedrooms. The building is 100 ft. high to the general line of coping. The gables and dormers go up above this, while the tower is 180 ft. high to the top. The building is faced with Portland stone externally, chiefly from the quarries of The Portland Stone Company, and roofed with green Westmoreland slates.

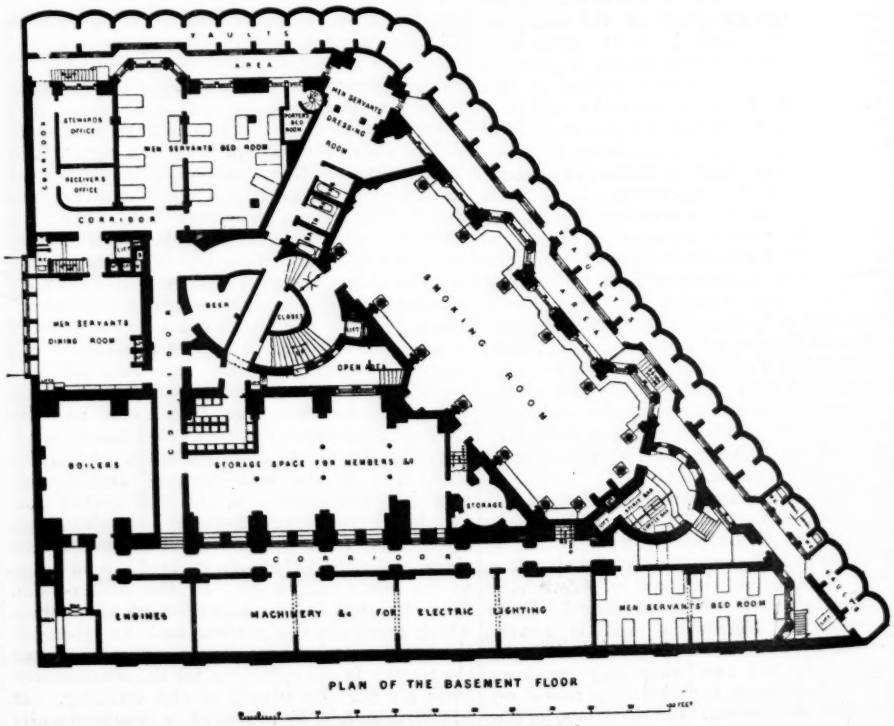
Having given this general description of the building, we proceed to describe in more detail some portions of its arrangement and construction.



PLAN OF THE UPPER GROUND FLOOR

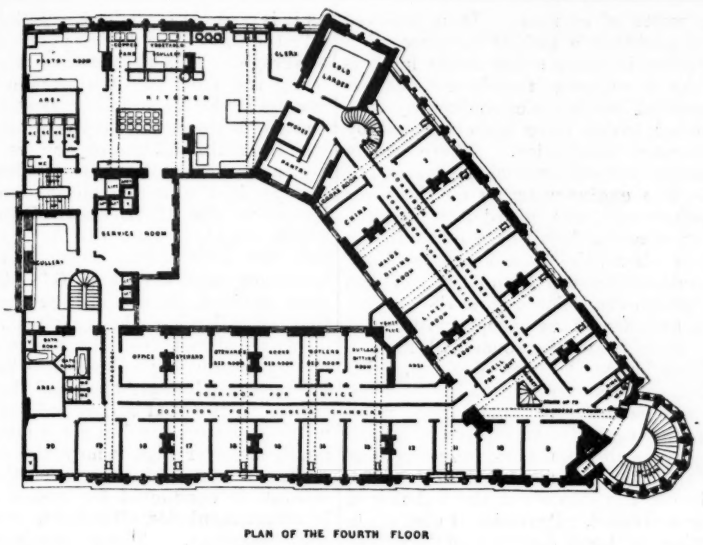


PLAN OF THE LOWER GROUND FLOOR

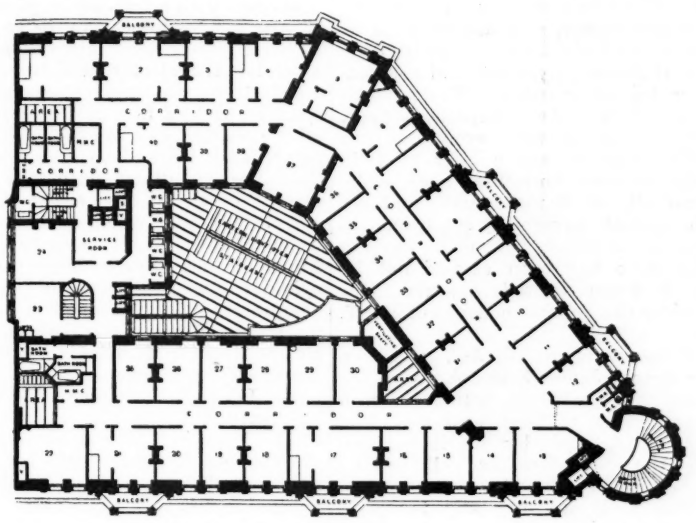


PLAN OF THE BASEMENT FLOOR

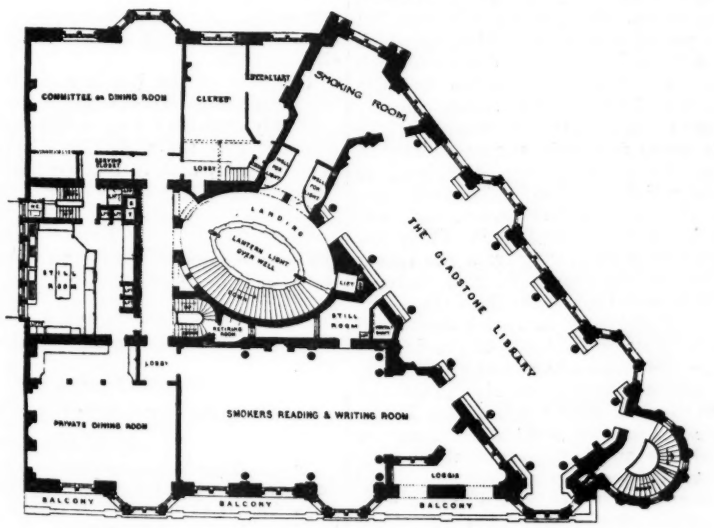
The National Liberal Club.



PLAN OF THE FOURTH FLOOR



PLAN OF THE SECOND FLOOR



PLAN OF THE FIRST FLOOR

The National Liberal Club.

All the floors are of fireproof construction. As has been already stated, Lindsay's steel decking has been adopted by the architect for the principal floors, owing to its great strength and the saving of space obtained in being able to lay spans up to 30 ft. and 35 ft., with a floor thickness (including concrete) of only 15 in. Messrs. Lindsay's patent steel columns have also been used throughout the building, and while the floors may be said to be like so many diaphragms connecting and tying the building together, the weights are transmitted down the steel columns to the basement, thus relieving the walls of all undue strain or vibration.

The floors of all the principal apartments have been covered by Mr. J. F. Ebner, of Clerkenwell-road, either with parquet or mosaic. All the parquet is laid on a new system patented by Mr. Ebner, described and illustrated in our last, and which consists in firmly attaching the wood to the concrete by means of specially constructed tiles with under-cut recesses on both sides; the tiles are floated on to the concrete, and the parquet is fixed to the tiles by a hard-setting bituminous composition, the whole forming a capital floor. All the members' chambers on the fourth, third, and second floors are paved with parquet in herring-bone pattern; but the Drawing-room, the Reading and Writing Rooms, the Gladstone Library, the Conference-room, the Billiard-rooms, and the private dining-room are of more elaborate but withal simple and effective designs. The corridors on the chamber floors, also the bath and dressing rooms, and the servants' rooms, are paved with 3 in. pitch pine blocks. The floors of the large Smoking-room, the Grill-room, and the large Dining-room have, for cleanliness' sake, been laid in mosaic, and it is intended to have small movable carpets under the tables and where else required. These floors are of Roman Meschiato, with rich borders between the columns. The entrance and staircase hall will also be laid with mosaic. The Billiard-room-corridor and other subsidiary corridors and retiring-rooms are laid with Ebner's improved Terrazzo mosaic, which makes an excellent floor, and is a cheap substitute for the more expensive Italian mosaics.

The ceilings, cornices, and casings to beams for the principal rooms have been executed by Messrs. George Jackson & Sons, of Rathbone-place, in their patent fibrous plaster. The enrichments were all specially modelled from designs supplied by the architect, Mr. Waterhouse. This fibrous plaster, as our readers know, has the great advantage of being fixed dry. It is screwed in large pieces to existing joists, no bracketing being required.

The staircase in the tower is fireproof, and has been constructed by Messrs. Dennett & Ingle. The wrought-iron balusters are by Mr. Peard (Hart, Son, Peard, & Co.).

In the decoration of the interior of the Club-house Mr. Waterhouse has adopted the use of Burmantofts faïence, made and supplied by Messrs. Wilcock & Co. on a very comprehensive scale. For a building of this description it was thought desirable that as far as practicable the decoration should combine the qualifications of permanence, architectural treatment, and cleanliness. With this view the architect has adopted the material in a variety of ways, the result being effective without over-elaboration of ornament or crudity of colouring. The large Smoking-room has its walls panelled in faïence, the mouldings being old gold in colour, the panels a diaper of pale primrose, and the margin ivory and grey. Down each side of the room are columns, the cores of which are of iron and cement, as already described, with a covering of faïence. The general result is very successful, the panels of the pedestals and the diapers of the shafts being especially noticeable. The colour of the lower portion of the pedestals is brown, picked out with bronze green, and the shafts are of the colour of old gold. These columns support an entablature, also treated in faïence. The ceiling is cut up into square and hexagonal forms, arabesqued with designs in relief, supported by moulded ribs of canary wood screwed to wood framing bolted to the underside of the decking of the floor above. The larger panels are about 3 ft. square, each in four separate plaques supported at the intersection by a small metal boss. The arcading and frieze on one side of the room are pleasing in effect. The workmanship is very good, and the appearance of the silver-grey tiles in the frieze panels is satisfactory. A pleasing feature is a faïence balcony at one end of the room with access to it from one of the corridors on the lower ground-floor. The same material is being largely used in the Dining-room and in the Smokers' Reading and Writing Room. In the former the faïence arches to the windows are full of character, and the rich brown employed in combination with the walnut fittings of the room when complete will give a distinctive feeling of comfort and character to this important room. In the Smokers' Reading and Writing Room the walls have been treated in panels on a distinct line from any other portion of the building, the methods employed being simple and the result satisfactory. The columns in this room, as throughout the building, including both pedestals, shafts, and caps, are all in Burmantofts faïence. The billiard-rooms on the lower ground-floor, seven in number, are lined with faïence up to 10 ft., panel and diaper treatment being again adopted, although there is considerable variety both in design and colouring. In a small room originally intended to be used as the card-room, but subsequently appropriated as the principal lavatory, there is a very good faïence frieze, and some well-executed pilasters in the same material. The principal corridors throughout the Club proper are lined with faïence, and this treatment is also adopted for all the architraves to archways leading from main corridors. The outer wall of the grand staircase is being covered with faïence in colours which harmonise with the general tone of the alabaster and marble. The entrance hall is being treated in

faïence, the whole of the openings being arched; and the reveals and soffit panels to doors, balconies, windows, and other openings from the staircase, are also constructed in faïence and panelled. The tile-work in the Billiard-room-corridor is by Messrs. Carter, Johnson, & Co.

The heating and ventilating arrangements were entrusted to Mr. W. W. Phipson. Two 97-horse power Babcock-Willcox steam boilers are fixed in the basement. For the general steam service of the building, including the heating and ventilation, hot-water service supply, culinary department, electric lighting, pumping the return water from the hydraulic lifts up to the large cistern in the tower; and for each of the services, separate steam mains are provided and fitted with regulating valves. The Porter-Clark process will be adopted for softening the supply water for the steam boilers, and will also be used for the water supplied to the members' lavatories, baths, &c. The system of heating and ventilation adopted is a forced supply of fresh air, warmed or not, as may be required, in the several air-chambers previous to its distribution over the building, the points of admission into the apartments being at a low and at a middle level, with means for regulating it at will, as before mentioned. The diameter of the Blackman air-propeller is 6 ft., and it is capable of supplying at a moderate velocity 2,000,000 cubic feet of air per hour. The heating of the air-chambers is effected by low-pressure steam, passing through a series of coils or batteries of gill-pipes fixed in the same, with suitable means of moistening the air when necessary. These chambers are worked in series by a separate steam main, the whole being under control in the boiler-room, where the main distributor and main return collector are fixed. The steam having circulated through these chambers, and returned to the main collector, is then carried into the lower receiver of the return trap, and by an automatic action the water of condensation is lifted into the upper receiver of this trap, and is then forced by the alternative action of the valves into the boilers. The working pressure of the boilers being 70 lb. per square inch, this pressure is reduced, before the steam is admitted into the main distributor for heating, by a Royle reducing valve. By this means steam at any pressure can be used for heating purposes as low as 3 lb. per square inch, and the water of condensation, by means of the return trap, as above described, is automatically returned to the boilers. In the Billiard-rooms and Smoking-room direct radiation is used for heating, while for ventilation all these rooms are connected to the air-propeller. For the extraction of the vitiated air five up-cast shafts are provided, and the air in the same is rarefied by means of steam coils. By the construction of the floors, air-spaces over the whole of the ceilings are formed between the troughs of the decking, and by numerous perforations made in the ceiling an efficient outlet for the air is provided, the space between the ceilings and the under side of the steel deck floors being placed in direct communication with the extracting-shafts before mentioned. Valves are fixed on all the inlets, and also on the air supplies to chambers, and thus control will be obtained of the several main air deliveries. Sprays of water for cleansing the air are fixed near the propeller, and worked at high pressure. The whole of this work, including the steam boilers, &c., has been carried out by Mr. Wilson W. Phipson, M.I.C.E., of John-street, Adelphi. The grates and stoves used were supplied by Mr. D. O. Boyd.

The building is to be lighted by about 850 Edison-Swan incandescent lamps. In most of the rooms these will be suspended singly from the ceilings and enclosed in cut-glass globes. The suspending silk cords are of pale yellow silk, and are all but invisible when the lights are in use, an arrangement which gives the lamps an extremely light and airy appearance, and also ensures a perfect and equal distribution of the light. In the case of the Gladstone Library and the Reading and Writing Rooms, the lamps are to be placed close to the ceilings in the body of the rooms, supplemented by two-light pendants in the bays and recesses. Each of the large rooms is divided into several circuits, so as to admit of partial lighting, and each lamp in the members' chambers on the upper floors will be under separate control. All the dressing-rooms and water-closets are fitted with automatic switches, which cut off the light when the rooms are not in use, thereby preventing waste of current. It is believed that this is probably a unique instance of a large installation in which every single lamp is controlled by a separate fusible cut-out; it has been carried out in strict conformity with the regulations which have been adopted by the fire insurance companies. There are in addition double pole cut-outs on the mains and sub-mains. The engine-room is on the river front, as before said, and in order to prevent any noise or vibration being perceptible in the billiard-rooms above, the utmost care has been taken in constructing the foundations of the machinery, which are isolated from the general foundations, and are of an exceptionally solid character. In addition the room will have a counter-ceiling below the iron decking, with layers of felt between the engine-bed and the brickwork supporting the same. The main switch-board is constructed of slate, on which are mounted massive gun-metal bars, so arranged as to admit of the complete control of each of the fifteen main circuits into which the lighting of the building is divided. Provision is also made for connecting a large battery of accumulators, with which it is contemplated to supplement the engine power, and the whole is so arranged as to admit of the connexions between the two sets of circuits, dynamos, and accumulators being interchangeable. The dynamo machines are of the Edison-Hopkinson type, constructed to run at 450 revolutions per minute. The engines are a pair of twin cylinder high-pressure horizontal engines, by Messrs. Marshall, of Gainsborough, and are fitted with special governing apparatus to ensure an equal and steady light under varying loads. The work has been carried out by the Edison & Swan United Electric Light Company, under the superintendence of Mr. T. O. Belshaw.

The kitchen, serving-rooms, &c., have been fitted up by Messrs. James Slater & Co., of the Holborn Engineering Works, with their own patent gas and steam cooking apparatus. The kitchen, sculleries, and larders have been arranged by the same firm, and all cooking apparatus is heated solely by either gas or steam. The sculleries are supplied with Messrs. Slater & Co.'s washing troughs, fitted with their combined water and steam inlet and waste outlet valves. The Grill-room is supplied with a large patent double gas griller, by which the whole of the grilling will be done, and with hot closets. The Smoking-room bar has also been arranged and fitted up by Messrs. Slater.

With regard to the lifts, the American Elevator Company is fixing one main staircase elevator, to rise from the Smoking-room floor level to the first floor, a distance of 58 ft. This will have an elegant car, with ample power, and will work in a brick shaft provided for it. There will be also a chambers lift, rising from the Lower Ground Floor to the fourth floor, a distance of 76 ft. This will be smaller than the staircase lift; it will also work in a brick shaft; and since, especially at certain hours of the day, its work will be heavy, it will run at high speed. There will also be a service lift, rising from the basement to the fifth floor, a distance of 112 ft. This, as its name implies, will be for the service of the Club-house, and for the servants as well. This also will have ample power, and will run at high speed. There will also be a wine lift, to take casks of wine, &c., from the ground to the basement level. This, however, will be a direct lift. The three first-named are of the American Elevator Company's Standard type of low-pressure hydraulic elevator. A large iron tank is fixed in the tower of the building, the water from which will be the motive-power for the elevators, and will also be available in case of fire. Since in this building steam-power is necessary for electric-lighting purposes, the elevators will discharge water as fast as it is used into a tank in the basement, and a Worthington steam-pump will be employed to lift the water back again to the tower tank, so that the water will be used over and over again continually, so far as the lifts are concerned; but water from this tank will also be used for other purposes, and the consequent continual fresh supply will keep the water in good condition. The cost of working the lifts in the building will therefore be merely the cost of pumping the water; and the working of the lifts only calls upon the steam-boiler employed for other purposes for the power required for the elevators, and this is estimated to not exceed three horse-power.

In order that the drainage arrangements of the building should be as perfect and complete as it is possible to make them, the architect has adopted the Shone hydro-pneumatic system of sewerage. This system has been adopted as being the most effectual means by which the sewage in the metropolitan sewer could be prevented, in times of heavy rainfall, from flowing into the main and branch sewers of the building, and thereby flooding the basement. The sewage in the metropolitan sewer has been known to rise 13 ft. above Ordnance datum, which might, in case the flaps at the outlets into the metropolitan sewer failed, flood the basement to a height of 6 ft., if the building were drained on the ordinary plan, namely, that of allowing the gravitation sewers to discharge direct into the metropolitan sewer. But by interposing a Pneumatic Sewage Ejecter between the Club premises and the metropolitan sewer, an effectual barrier is interposed against not only sewage gas, but also against the sewage itself, however high it may rise in the metropolitan sewer. The whole of the sewage and rainfall is conducted by means of 6 in. pipes into four manholes, situated in various parts of the basement. These manholes are each connected with a 6-in. outlet pipe, the gradients of which vary from 1 in 70 to 1 in 140, and by which the sewage gravitates to a manhole adjoining the ejector station, in the latter of which there are two of Shone's pneumatic ejectors, each of fifty gallons capacity; so that all the sewage and rainfall is collected at one point, and flows into the ejectors, which discharge it direct into the metropolitan sewer, even if the sewer is full. The compressed air which actuates the pneumatic ejectors will be supplied by a Westinghouse air compressor having a 6-in. steam cylinder and a 7½-in. air cylinder. The compressor is so arranged as to work automatically. The sanitary fittings, such as water-closets, lavatories, urinals, baths, &c., are by Messrs. Tylor & Sons.

Mr. James Hill, of Queen Victoria-street, has been entrusted with the contract for the whole of the locks and door furniture, together with the swing-door hinges, grip handles, sash and casement fittings, and all the brass-founders' work throughout. The locks are all under master-key arrangements, and Mr. Waterhouse's own designs have been carried out in the work generally. Mr. Pearse has supplied the metal casements, and Mr. Julius Sax has fitted the electric bells.

The cost of the building, exclusive of site, has been about 150,000*l*.

It only remains for us to add that the general contract was taken by Mr. George Shaw, of Westminster, and is being carried out now by his executors. The foundations were put in by Mr. Henry Lovatt, of Wolverhampton. The building, as a whole, reflects much credit upon the architect, Mr. Waterhouse, R.A. The design is Early Renaissance in character. The clerk of works, to whom we are much indebted for conducting us over the building, is Mr. Thomas Warburton, a thoroughly practical and able man.

PUSH AND PULL LOCKS.

KAYE *v.* CHUBB AND SONS.

ON the 25th November last year, in an action for infringement of patent, brought by Messrs. Kaye against Chubb & Sons' Lock and Safe Company (Limited), Mr. Justice Mathew, sitting without a jury, gave judgment for the plaintiffs with costs. From this decision Messrs. Chubb appealed.

The question was whether a push and pull lock made by Messrs. Chubb was an infringement of the plaintiffs' patent of 1887. Messrs. Chubb contended either that Messrs. Kaye's patent was bad for want of novelty, or that, if good, the lock made by them (Chubbs) was no infringement; and they relied principally upon the prior inventions of Mr. Brodie and Mr. Imray in support of their case.

After hearing lengthened arguments of counsel on both sides, the Master of the Rolls, in giving judgment on Monday, the 16th inst, in favour of the defendants, Messrs. Chubb, said he had come to the opinion that what Mr. Kaye had done was to take the second alternative of Mr. Imray's specification and to claim a patent for that. That in law he could not do. He was aware that in this case he was assisted in that performance by Mr. Imray himself, but that could make no difference as to the construction. Mr. Imray was applying himself to that which was part of his professional skill, namely, to draw patents for people which should do exactly what his patent did in one of the alternatives, but without saying so. His judgment went on this ground, that the plaintiffs' patent was bad, because it was identical with the second alternative in Mr. Imray's patent. Therefore the defendants were

entitled to succeed in their appeal, and would receive costs in the action as well as the costs in the appeal.

Lords Justices Fry and Lopes concurred.

Judgment was entered for Messrs. Chubb, the defendants, accordingly.

ON THE QUESTION OF LIFTS.

SIR,—May we ask the favour of space for one or two comments upon the remarks on lifts in Mr. Slater's paper on "New Materials and Inventions," read before the General Conference of Architects? [See *Builder*, p. 703, *ante*].

Our principal object in writing is to point out a very serious error into which Mr. Slater has fallen, no doubt inadvertently. He states (quoting your report) that the Otis Elevator "can be worked at a very low pressure, say 40 lb. to the square inch, whereas other hydraulic elevators require a very high pressure, that would have been almost impossible to obtain a few years ago, before the introduction of the hydraulic power system of high-pressure mains, where pressure up to 700 lb. per square inch can be obtained." In correction we beg to say:—First, that twenty-five years ago we were erecting lifts working at 30 lb. per square inch. We have in London one passenger-lift working at 23 lb. per square inch, several between that pressure and 30 lb., and a large number at 30 lb. We think we are well within the mark in saying there are at least 200 hydraulic lifts, other than the Otis Elevator, working in London at pressures not exceeding 30 lb. Secondly, before the formation of the Hydraulic Power Co. we had erected many lifts working at 700 lb. pressure per square inch,—there is practically no difficulty in obtaining the pressure if it is required. Thirdly, there is scarcely a lift erected in connexion with the Hydraulic Power Co.'s mains which could not have been worked at 30 lb. pressure per square inch had it been considered desirable or advantageous to do so.

With Mr. Slater's remarks upon the safeguards requisite with suspended lifts we entirely agree, merely adding that we shall be pleased to show him lifts of English manufacture which comprise all the precautions he enumerates, and from which the second danger he ascribes to the Otis lift is absent. The English lift, being absolutely controlled by its valve, cannot run down if overloaded; in it, overloading must be carried to the fracturing point before danger can arise.

Mr. Slater avoids the question of pressures, high *v.* low. Much misconception exists upon this subject, and perhaps we may be allowed a few words upon it.

Each system has its proper place, and a few instances will make this most clear.

1. A building in a position where a natural supply, or an ordinary town's supply, of fair pressure is available, no external high pressure to be had, and for a dozen conceivable reasons pumping machinery admissible. Low pressure is clearly the only possible resource.

2. A building of larger dimensions requiring, say, two or more lifts frequently in use; no natural head of water available, and the town's supply either too far away, or supplied at a price ranging from 6d. to 10d. per 1,000 gallons. It would generally be economical for such an establishment to pump its own power, and in so large a building a suitable position could be found for the machinery. Under these conditions we may have any pressure we please; we may pump into tanks within the building, giving a pressure up to perhaps 30 lb. per square inch, or tanks on a hill-side giving say 100 lb. to 150 lb. pressure, or we may pump into an accumulator, dispensing with tanks, and obtaining a pressure of from 500 lb. to 800 lb. according to fancy. Which shall it be? Economy of power, as measured by consumption of coal or gas, will be the same for all pressures, notwithstanding interested statements to the contrary. Wear and tear practically the same. First cost of low-pressure lifts and pipes will be greater than the high pressure; but, on the other hand, low-pressure pumps and tanks will mostly be cheaper than high-pressure pumps and accumulator, and the difference for an entire system of either type will not be great,—the balance occasionally inclining to either side. Convenience will in this case decide. Suppose the building is residential; during the day, with the various noises of the daily routine in progress, with the majority of residents out, or moving about, the lift pumps would be unnoticed; but in the later hours of the evening these conditions would all be reversed, and the slight noise of the pumps prove objectionable. Pumps must consequently be stopped, but lifts must continue working occasionally till all have retired for the night; and to meet this requirement considerable storage is requisite. Now, low-pressure tank-storage is cheap, and easily increased if required; high-pressure accumulator storage is the exact reverse, and therefore, in this case, low-pressure again wins.

But if our building had been a warehouse or a factory, where the pumps may run as long as the lifts are required, and where the building, being comparatively low, no considerable height could be obtained for the tanks, then the balance of convenience would be in favour of the high-pressure system.

3. A building which can be supplied either by the low-pressure town's supply, with 30 lb. pressure, at say 10d. per 1,000 gallons, or by the Hydraulic Power Company, with 700 lb. pressure. Pumps inadmissible. Here the high-pressure lift will cost from two-thirds to three-fourths only the price of the low-pressure. The high-pressure pipes will cost a little over half. The high-pressure water for a given amount of work will cost one-fifth the price of the low-pressure. The space occupied by the high-pressure lift machinery will be only three-fourths that of the low-pressure. A 1¼ in. high-pressure pipe will do the work of a 4 in. low-pressure.

With these facts before him, what purchaser would choose the low-pressure in this case?

To sum up, there is no inherent evil or difficulty in the use of high-pressure. On the other hand, the user's interests lie in its direction, and he should always endeavour to get the highest pressure available, assuming that he can get it without accompanying inconvenience. Let him not be frightened by the alleged dangers of high pressure, such as the bursting of cylinders and pipes, the "blowing out of valves," &c.: they are purely imaginary. We erected two sets of such machinery, one five years and the other four years ago, and have never had to attend to either since.

ARCHD. SMITH & STEVENS.

May 11, 1887.

THE HOTEL BOURGTHEROLDE.

SIR,—It may interest your readers to know that the window in the Hôtel Bourgtherolde, Rouen, illustrated in your impression of the 7th inst., is the one a plate of which, accompanied by highly laudatory remarks, appears in Mr. Ruskin's somewhat scarce book "Lectures on Architecture and Painting."

T. G. ASHTON.

A CORRECTION.

SIR,—By your special report of the education meeting of the late Conference, I see that the Chairman, speaking very kindly of Mr. Millard's and my intention to found an *atelier*, said that I had been a Pugin Student. That is a distinction of which those who have earned it are rightly proud, but, unfortunately, I am not one of the number; Mr. Cates was probably thinking of my colleague, who is.

FRANK T. BAGGALLAY.

A PROTEST.

SIR,—Mr. Beaumont, in his letter to the Architectural Association (*vide Builder*, May 14th), classifies quantity surveyors along with "young men just out of their articles" (which infers incompetence), "architectural fossils, and drunkards." Possibly Mr. Beaumont did not intend to cast any aspersions, but is not his particular form of expressing himself a little rough on the humble quantity surveyor?

ONE OF THEM.

*** The sentence appears to us to be in exceedingly bad taste, to say the least.—ED.

STEAM-ROLLERS.

SIR,—The Court of Queen's Bench, presided over by Mr. Justice Grove, has recently been engaged on a case of peculiar interest and of some importance to local authorities. The action in question was brought by the Gas Light and Coke Company to restrain the Vestry of St. George's, Hanover-square, from using steam road-rollers of such weight as would fracture or injure the gas-mains of the Company, and also for damages in respect of certain mains actually fractured by the Vestry's steam-roller. The weight of the roller used by the defendants was 15 tons, which weight, speaking without prejudice, but from a practical point of view, is not essential for making good roads. Macadamised roads are not much better now than they were some years ago in the days of the inventor of this particular kind of road, Sir John McAdam, and before steam-rollers were invented; and though it cannot be denied for a moment that steam-rollers have great advantages, or that road authorities are entitled to use them for promptly and efficiently repairing the streets, yet it must appear to both practical and non-practical men that the weight of the roller used by the defendants was neither reasonable nor necessary.

The principle of the formation of macadam roads is that the stones, by reason of their angularity, should bond and key together, and if a light roller is used, the effect is produced, the stones being gradually consolidated and fitted into each other, forming an almost homogeneous mass. If a heavy roller is brought on them, the stones do not get pressed or wedged into this position, but are crushed together, the angles of the small granite cubes being pulverised, and the holding power diminished. The passage of a heavy wagon, or even of a heavily-laden trolly, would not, as the Vestry have endeavoured to show, have the same damaging effect on underground pipes and mains as the steam-roller, and although their weight might be as great as the roller it would probably only pass over the mains for a short length, and then off again; whereas, a roller in rolling a street passes and repasses over the same spot scores of times before the road is properly consolidated.

Of course, it cannot be contended that work is as quickly or as cheaply done by the employment of light rollers; but there are other elements in the case than those of speed and economy, and where danger both to person and property is likely to follow the employment of rollers of such crushing weights as 15 tons, the road authorities should at least take care to ascertain the positions, size, and age of all mains likely to be affected, prior to the work of the formation of roads, by means of steam-rollers, being commenced.

E. F. S.

RECENT PATENTS.

ABSTRACTS OF SPECIFICATIONS.

5,442, Square Turning. J. C. V. Stacey.

The method of square turning by means of attaching the articles, newels, balusters, table and sofa legs, &c., by attaching them to a large revolving drum, is not here claimed as new, but the novel features claimed are: (1) The manner of securing the various articles inside the circumference of the drum by a recessed flange and two small steel pins. (2) Four loose iron sections of rings and four cramps are also used for securing; and (3) A large wooden ring attached to the inner circumference of the drum, diminishing the size of the drum, so that a smaller number of articles may be turned.

7,100, Wedge for Doors. J. G. Rollason.

The subject of this invention is a little wedge-shaped appliance with an inverted horn piece, so fixed that while the top part of the catch presses into the door or window the end of the inverted horn sinks into the wood of the floor or frame and effectually prevents it from being forced open.

7,282, Door Checks. J. H. Jefferies.

The subject of this invention claims to be an improvement on the ordinary form of pneumatic door-checks in the direction of greater compactness and, by hinging the arm of the appliance, greater ease and certainty in working.

9,824, Mitreing Machines. A. Muir.

This invention relates to a hand mitre-cutting machine consisting of a knife or cutter mounted on a triangular frame having a stud fixed on one side which carries a lever with a long slot; which slot operates on a stud fixed on centre of knife or cutter carrier. The lever operates at right angles to the machine. The machine is pivoted in front of a triangular frame, which enables it to be adjusted to any angle, so that all mitres, simple or acute, can be executed with ease and expedition.

15,965, Moulded Slag Paving. C. J. Dobbs.

According to this invention fillets are formed upon the side of the paving blocks, to obviate the use of the wooden strips generally employed. The fillets keep the blocks a proper distance apart, and form also a narrow channel between them, into which cement is run to bind the whole paving together.

1,908, Casement Fastenings. Kristensen and Jensen (Copenhagen).

This patent relates to a fastener designed with a view to extreme simplicity, and to operate in all sorts of weather, so as to enable the casement to be readily opened or closed. The lever, which slips into an ordinary catch, has two arms, a long and a short one, and when the shorter arm is moved across the opening or joint it fastens the casement securely. The longer arm also affords a means of drawing the sashes firmly together, or when opening to force them a little apart so that the casement may be readily opened.

NEW APPLICATIONS FOR PATENTS.

May 6.—6,648, J. and C. Severs, Draught, Dust, and Rain Excluder, for Doors and Windows.—6,649, W. Anderson, Ventilating Sashes.—6,651, H. Bensted, Water-closet Pan.—6,672, A. Boult, Window-sash Balances.—6,675, A. Boult, Hangers for Sliding Doors or Windows.

May 7.—6,695, J. Fairbairn, Window-sash Fasteners.—6,701, B. Thwaite and Others, Manufacture of Portland Cement.—6,709, G. Shepherd, Chambers for Drying Timber, &c.—6,741, J. Klif, Sliding Square for Carpenters, Stair-builders, &c.

May 9.—6,802, J. Hoyle, Burning Cement and Lime, and Kilns for same.—6,804, J. Johnson, Machines for Sawing or Cutting Stone.

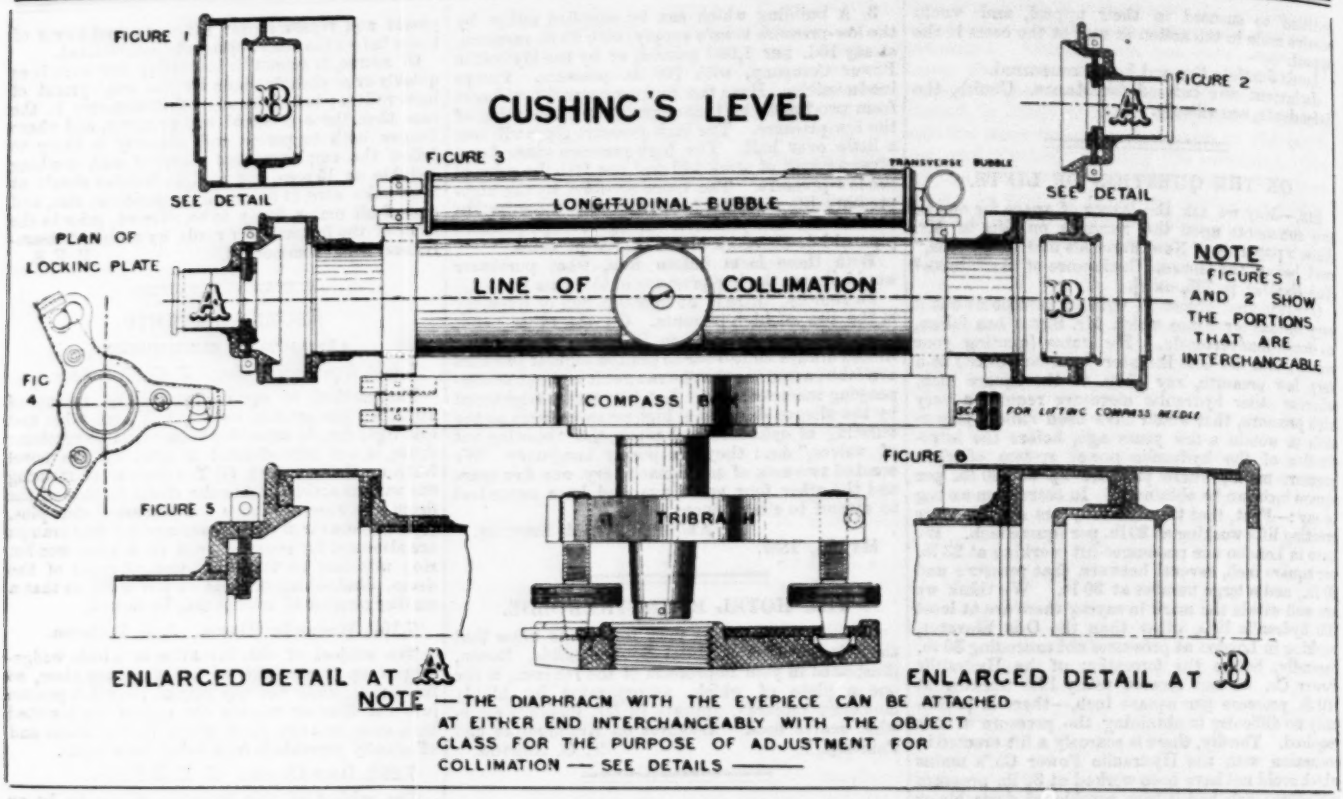
May 10.—6,809, J. and E. Eshelby, Electric Bell Indicators.—6,820, W. Gwinett, Eave Plate with or without Gutter, for use with Corrugated Roof and Wall Coverings.—6,881, H. Lake, Window Frames and Sashes.—6,884, F. Chapman, Improved Nail.

May 11.—6,887, J. Jackson, Water-waste Preventing Syphon Cisterns.—6,919, A. Ward, Water-closets.—6,923, J. Nicholas and H. Fanshawe, Stoves.

May 12.—6,937, R. Ripley, Paint or Colouring for Metalwork, Stonework, Stucco, &c.—6,958, J. Campbell, Glue.—6,977, T. Roberts, Portable Terra-cotta Stoves.—6,990, L. Sunter, Water-closets.

PROVISIONAL SPECIFICATIONS ACCEPTED.

479, J. Shaw, Gullies and Sinks.—4,231, H. Lehmann, Wood Planing and Turning Machines.—4,417, J. Holding, Window Sashes in Open or Closed


CUSHING'S LEVEL
FIGURE 1
SEE DETAIL
FIGURE 2
SEE DETAIL
FIGURE 3
TRANSVERSE BUBBLE
LONGITUDINAL BUBBLE
PLAN OF LOCKING PLATE
LINE OF COLLIMATION
NOTE
FIGURES 1 AND 2 SHOW THE PORTIONS THAT ARE INTERCHANGEABLE
FIG 4
COMPASS B
FOR LIFTING COMPASS NEEDLE
FIGURE 5
TRIBRACH
FIGURE 6
ENLARGED DETAIL AT A
ENLARGED DETAIL AT B
NOTE — THE DIAPHRAGM WITH THE EYEPIECE CAN BE ATTACHED AT EITHER END INTERCHANGEABLY WITH THE OBJECT GLASS FOR THE PURPOSE OF ADJUSTMENT FOR COLLIMATION — SEE DETAILS

Position.—4,773, A. Boult, Door Checks.—4,818, S. Taylor, Metal-covered Roofs.—4,835, T. Le Poidevin, Brickmaking Machine.—5,155, J. Hooton, Manufacture of Portland Cement.—3,459, F. Sage, Door Stops or Abutments.—3,536, B. Walchner, Saw-plate for Cutting Marble or Granite.—4,404, J. Killey, Air-inlets for Drains.—4,611, N. Naudey, Cross-cut Saws.—4,927, J. Wilson, Street Paving.—5,100, T. Robinson, Wood-planing Machines.—5,138, H. Hutchens, Chain Fasteners for Doors, Windows, &c.—5,171, N. Helme and Others, Paper-hangings.—5,477, D. Cowan, Cooking Ranges, Stoves, or Fireplaces.—5,762, T. Panario, Water-waste Preventers.—5,847, H. Hagon, Chimney Pot for Smoky Chimneys.—5,848, J. Ditchfield, Water Taps for Joining to Lead Pipes.—6,080, J. Eves, Water-closets.

COMPLETE SPECIFICATIONS ACCEPTED.

Open to Opposition for Two Months.

6,517, A. Rust, Stoves.—7,888, F. Stokes, Manufacture of Cement.—7,941, J. Hill, Saw-Sharpening Apparatus. — 7,954, T. Twyford, Water-closet Basins and Mode of Flushing them.—8,663, Syer & Clark, Water-waste Preventing Apparatus.—8,676, W. Temple, Mouthpiece for Horizontal Brickmaking Machines.—8,876, H. Hennes, Self-acting Fastenings for Doors and Windows.—8,889, W. Dryden, Safety Fastenings for Window Sashes.—9,895, G. Rayner, Retaining Catches for Doors.—15,607, G. & M. Stowe, Bolt for Windows and Doors.—268, Cabuy & Lamal, Drain Traps.—8,907, T. Helliwell, Fixing Sheets of Zinc, Lead, Copper, &c., to Roofs, Flats, or Sides of Buildings, &c.—9,111, H. Buchan, Valve Apparatus for Water-closets.—3,803, F. Frenzel, jun., Encaustic Tiles.—5,087, W. Townend and F. Ullathorne, Sash Fasteners for Windows.—5,204, G. Price, Water-closets, &c.

The Student's Column.

FIELD WORK AND INSTRUMENTS.—XXI.

Levelling Instruments.

V.—CUSHING'S LEVEL.

IN Cushing's level the object-glass and the eye-piece are constructed to be interchangeable. Figs. 1 and 2 show the eye-piece and object-glass ends, marked A and B, removed from the telescope. A gun-metal socket is fixed, as shown in section in fig. 3, upon one end of the inner brass tube and also upon the opposite end of the outer brass tube, both sockets being flanged to receive either the eye-piece or the object-glass fittings. The object-glass fitting at B is made somewhat longer than the fitting at A, because it has to carry the shade cover, but in other respects the bearing surfaces to receive either the object-glass or the eye-piece ends are identical. The eye-piece is attached to the telescope by a kind of bayonet fixing, in which it is brought to its proper position against stops, and secured to the flange of the socket by means of two screws. The object-glass end is fixed in a similar manner. The eye-piece end carries the diaphragm plate, which contains fine lines ruled upon plain and parallel glass instead of spider's lines. Away from a town or city, where a mathematical instrument maker could not be found except at a considerable distance, the possession of a diaphragm of this character may be an argument in favour of its use, but the amount of light lost by the reflection and absorption of the glass plate gives to the ordinary open form of spider's web diaphragm a decided advantage. In Cushing's level the adjustable diaphragm plate being attached to the removable eye-piece end, it might be dangerous to remove it in the open field unless the diaphragm was of this permanent nature. The telescope is supported by the ends of the horizontal limb containing the compass, as shown in fig. 3, the support at one end (where a means is provided for lifting the compass needle), being capable of a slight rocking motion in the direction of the axis of the telescope, while the support at the other end has a lifting or lowering arrangement for adjustment in setting the axis of the telescope at right angles to the vertical axis of the instrument. The vertical axis is fixed rigidly to the limb, and revolves in a socket made in the central boss of the upper parallel plate, being secured by a nut at its lower end. The parallel plates as shown in plan in fig. 4, are constructed upon the tribach principle explained in article xi. (March 12th, p. 412).

Having made the longitudinal bubble reverse by means of the capstan-headed nuts attached to the screws fixed at the end opposite to the transverse bubble, the parallelism of the optical axis in the telescope to the run of the longitudinal bubble can be tested by reversing the eye and object glass ends. If any adjustment is needed it is effected by means of the vertical capstan-headed nuts in the eyepiece. In thus testing the line of collimation it is, of course, necessary to traverse the telescope half-round, after reversing the ends A and B, so that the point in a distant object viewed with the eye-piece at one end of the telescope may be again observed with the eye-piece attached to the other end. It is important, in changing the object-glass from one end to the other in this adjustment, to observe that the part of the cell which has the small screw-hole in it is kept uppermost, and that the eye-piece is reversed without turning the diaphragm plate vertically over.

New R.C. Church for Liverpool.—In a limited competition for the new Catholic Church of St. Sylvester, Liverpool, the design with the motto "Lux" has been accepted. The authors of the design are Messrs. Pugin & Pugin.

RECENT SALES OF PROPERTY.

ESTATE EXCHANGE REPORT.

MAY 9.

By G. A. WILKINSON.

Shepherd's Bush—95 to 115, odd, Starch Green-road, copyhold	£2,350

By A. CHANCELLOR.

Richmond—Holbrook House, with grounds, freehold	3,080
Bracknell (near)—Enclosures of land, 38a. 0r. 12p., freehold	800
Enclosures of land, 30a. 3r. 29p., freehold	700
Two enclosures of land, 5a. 0r. 24p., freehold	176

By J. WILSHIN.

Norwood Hill—Sherborne Lodge, 37 years, ground-rent 8*l.*	400

By Messrs. LEAGE.

South Hackney—7 and 9, Handley-road, 52 years, ground-rent 9*l.*	640
Stepney—120, Clark-street, 14 years, ground-rent 4*l.*	125

By RAINE & KAUFMANN.

Kensington—2 and 11, Drayton-gardens, freehold	2,500

By R. TOMLINSON.

Thornton Heath—2 and 3, Wilton-terrace, freehold	670
4, Wilton-terrace, freehold	280
Wandsworth—20a, 22a, and 24a, Cologne-road, 91 years, ground-rent 21*l.* 15s.	975
Barking—2 to 16, even, Hardwicke-street, 97 years, ground-rent 22*l.*	725

MAY 10.

By R. W. MANN & SON.

Belgravia—The lease of 19, Chapel-street, term 22 years	260

By COLLIER & BOWDICH.

Cambridge Heath—475 and 477, Cambridge-road, freehold	1,600

By WINSTANLEY, HORWOOD, & Co.

City—26, Paternoster-square, freehold	2,770
Paddington—3, Amberley-road, 75 years, ground-rent 6*l.*	355

By E. & H. LUMLEY.

Mile End—13 and 15, New-street, 19 years, ground-rent 4*l.* 2s. 6d.	175
25 to 53, odd, New-street, 20 years, ground-rent 27*l.*	1,725
Spitalfields—34, 48, and 55, Flower and Dean-street, 4 years, ground-rent 84*l.*	205

By C. & H. WHITE.

St. Luke's—42 to 58, Bastwick-street, 44 years, ground-rent 120*l.*	3,400
Haslemere, Surrey—Two enclosures of freehold land, 3 acres	140
Bockhampton, Hants—Horn Cottage, freehold	60

By H. J. BLISS & SONS.

Bethnal Green—83 to 91, odd, Treadway-street, 49 years, ground-rent 20*l.*	1,380
Bromley-by-Bow—16 and 17, Box-street, 89 years, ground-rent 7*l.*	130
Bethnal Green—12 and 170, Bewardstone-road, 71 years, ground-rent 8*l.* 18s.	680
North Bow—26, 28, 36 to 54, even, Usher-road, 76 years, ground-rent, 44*l.* 5s.	2,230
Hackney-road—93 and 95, Weymouth-terrace, 27 years, ground-rent 7*l.*	370
14 and 16, Loddiges-road, 52 years, ground-rent 12*l.* 7s.	500
6, Arthur-street, 56 years, ground-rent 4*l.* 5s.	205
158, Chatsworth-road, 92 years, ground-rent 6*l.* 10s.	225
West Dulwich—1 and 2, Claremont-villas, 73 years, ground-rent 12*l.*	300

MAY 11.

By HOBSON, RICHARDS, & Co.

Wandsworth—1 to 5, Red Lion-square, 71 years, ground-rent 15*l.*	£275

By ROBINSON & RUDKIN.

Eltham—The Park Tavern beerhouse, freehold	950
King's Cross—60, Burton-crescent, 19 years, ground-rent 31*l.* 10*s.*	150

By A. J. ROGERS & Co.

Thornton Heath—2, Brighton-terrace, freehold	200

By A. & A. FIELD.

Stepney—1 to 13, Market-street, 88 years, ground-rent 40*l.*	1,600
Mile End—27, 28, and 29, Lichfield-road, 56 years, ground-rent 10*l.* 10*s.*	1,015
Limehouse—14, Northey-street, freehold	290

By Messrs. CRONK.

Acton, Creswick-road—Grasgarth, freehold	2,190
Horn-lane—two plots of freehold land, with erections thereon	400
Ilford, St. Mary's-road—A plot of freehold land	31

MAY 12.

By C. C. & T. MOORE.

Stratford—97, 99, and 101, Angel-lane, 82 years, ground-rent 23*l.* 10*s.*	1,000
Forest Gate—20, 22, and 24, Wellington-road, 77 years, ground-rent 9*l.*	380

By C. P. WHITELEY.

Bloomsbury—28, Upper Bedford-place, 36 years, ground-rent 25*l.*	1,100
An improved rental of 41*l.* 2*s.*, term 5 years	150

By J. H. GREEN & SON.

Marylebone—9, 11, and 13, Richmond-street, 34 years, ground-rent 12*l.*	500

By NEWSON & HARDING.

Forest Gate—2, 4, 5, and 6, The Limes, freehold	910
Hackney—140, Amhurst-road, 79 years, round-rent 8*l.* 8*s.*	705
Hoxton—63, Herbert-street, 55 years, ground-rent 6*l.* 6*s.*	485
Holloway—16, Tollingham-road, 47 years, ground-rent 6*l.* 6*s.*	325
61, Eden-grove, freehold	600
Ground-rents of 24*l.*, reversion in 93 years	615
An improved rental of 16*l.*, term 16 years	58

By E. STIMSON.

Camberwell—319A, Camberwell-road, 46 years, ground-rent 30*l.*	170
Peckham—38 to 72, even, Cator-street, 75 years, ground-rent 66*l.*	3,150
85, Camden-grove North, 75 years, ground-rent 4*l.*	210

By FAREBROTHER, ELLIS, CLARK, & Co.

Hyde Park—68, Gloucester-terrace, 51 years, ground-rent 2*l.*	2,500
Beds, Henlow — High-street, twelve freehold cottages	805
Park-lane, four freehold cottages	105
Langford—Two freehold cottages	80
An enclosure of market-garden land, 20*a.* 0*r.* 4*p.* freehold	600

MAY 13.

By DOWSETT & WOODS.

Hackney—80, Downs Park-road, 89 years, ground-rent 7*l.* 7*s.*	360

By BAKER & SONS.

Clapham—A profit rental of 88*l.* a year, term 48 years	1,210

By B. BROWN.

Newington Causeway—21, Rockingham-street, 1 to 11, odd, Uxbridge-street, and 5 and 6, Dorset-street, 22 years, ground-rent 40*l.*	575
Stoke Newington—33, Dynevor-road, 87 years, ground-rent 6*l.* 10*s.*	320
Hackney-road—13 and 26, Gloucester-street, 18 years, ground-rent 3*l.*	320
22 and 23, Gloucester-street, 28 years, ground-rent 3*l.* 3*s.*	420
Improved ground-rent of 9*l.* term 30 years	75
Improved ground-rent of 14*l.* 12*s.*, term 28 years	165
65 to 73, odd, Treadway-street, 19 years, ground-rent 5*l.*	740
38 and 40, Temple-street, 18 years, ground-rent 6*l.*	230

By WOODS & SNELLING.

Lower Edmonton—1 and 2, St. Mary's-terrace, freehold	850
Caterham—4, 5, and 6, Asylum-view, 91 years, ground-rent 12*l.* 3*s.*	85
Penge—Ground-rent of 8*l.*, reversion in 65 years	210
Ground-rent of 8*l.*, reversion in 69 years	175
Ground-rent of 3*l.*, reversion in 65 years	65
28 and 30, Woodbine-grove, freehold	245

MEETINGS.

SATURDAY, MAY 21.

Architectural Association.—Visit to St. Thomas's Seminary and Chiswick Church. 2·30 p.m. (See Advertisement.)

Liverpool Engineering Society.—Visit to the Liverpool United Gas Light Company's Works at Linacre.

MONDAY, MAY 23.

Royal Institute of British Architects.—Mr. John Phillips, C.E., on "The Drainage of the Palace and City of Westminster." 8 p.m.

Surveyors' Institution.—Mr. W. Simms on "The Regent's Park Estate: its Origin and Development." 8 p.m.

Sanitary Legislation Conference.—Discussion of the Sanitary Registration of Buildings Bill. 2 p.m.

TUESDAY, MAY 24.

Society of Arts (Applied Art Section).—Mr. Walter Crane on "The Importance of the Applied Arts, and their Relation to Common Life." Prof. Herkomer in the Chair. 8 p.m.

Institution of Civil Engineers.—Sir Frederick Abel, F.R.S., on "Accidents in Mines." Part I. 8 p.m.

Parkes Museum (Lectures for Sanitary Inspectors).—Mr. A. Wynter Blyth, M.R.C.S., L.S.A., on "Metropolitan Acts, By-laws of Metropolitan Board of Works." 8 p.m.

Glasgow Architectural Association.—Visit to Linlithgow.

WEDNESDAY, MAY 25.

Society of Arts.—8 p.m.

Artists' Benevolent Fund.—78th Anniversary Dinner, Freemasons' Tavern. Mr. Alma Tadema, R.A., in the Chair. 7 p.m.

THURSDAY, MAY 26.

Society of Telegraph-Engineers and Electricians.—(1) Mr. Charles Fleetwood on "Underground Telegraphs." (2) Professor W. Ayrton, F.R.S., and John Perry, F.R.S., on "Driving a Dynamo with a very short Belt." 8 p.m.

SATURDAY, MAY 28.

Association of Public Sanitary Inspectors.—Meeting at Eastbourne.

Miscellanea.

Liverpool Engineering Society.—A meeting of this Society was held at the Royal Institution, Colquett-street, Liverpool, on Wednesday, May 11th, Mr. John J. Webster, M.Inst.C.E., President, in the chair. A paper was read by Mr. J. F. Waddington on "Submarine Vessels." In commencing the paper, the author gave a brief history of what had been done in submarine navigation. Few persons, he said, would be aware that the idea of a vessel to travel under water was anything but a new idea. There were records of submarine vessels as far back as 1648, and a very interesting series of experiments were made by Fulton in 1801. Submarine vessels, he stated, were used in the American Civil War, and numbers of patents had been taken out in America, none of which, however, had come to anything. He then referred to the submarine vessel the *Resurgam*, designed by Mr. Garratt, and tried in the Birkenhead Float in 1879, and also the Nordenfelt boats, which were also from Mr. Garratt's designs. His own submarine vessel, the *Porpoise*, which was tried last year before the representatives of the British and Foreign Admiralties, was then described. She was, he said, 37 ft. long by 6 ft. 6 in. beam, and was arranged to be propelled by electricity. The *Porpoise* was submerged when under way by means of inclined planes, which, when the buoyancy of the vessel had been sufficiently reduced by taking in water, were set over at an angle, and so guide the vessel below the surface. He also described the horizontal propellers, working in vertical tubes, used in his boats for the purpose of driving below in cases of emergency when there was no way on the boat. The great danger with submarine vessels of suddenly diving by the head when going at any great speed, was then dealt with, and he showed how, by means of a horizontal rudder arrangement, actuated by an automatic electric steering gear, he had met this danger. Compressed air for consumption by the crew was, he said, carried in two compartments at the ends. For the propulsion of the vessel, and for driving the various machinery on board the vessel, the electricity was stored in forty-five accumulators of 660 ampère-hours capacity.

Formation of an Architectural Society in Sheffield.—Last week, on the initiative of Mr. T. J. Flockton, a meeting was held to consider a proposal to establish an architectural society in Sheffield. Mr. Flockton presided, and the meeting was addressed by Mr. C. Hadfield, who pointed out that Sheffield had no representative body for dealing with professional questions and for communicating with other societies thereon. The R.I.B.A. was inaugurating compulsory examinations, and it was important that pupils and assistants should be prepared to pass the examinations, and encouraged to avail themselves of every opportunity for improving their technical education. Such a society would accomplish this end. Good work was being done in this direction in Liverpool, Manchester, Leeds, and other large towns by similar societies. Eventually it was resolved to form a society. Mr. W. C. Fenton was appointed hon. sec. *pro tem.* of the provisional committee.

Stamford Hill.—A three-light stained-glass window, representing "The Crucifixion," has just been placed in the new Church of St. John, Stamford Hill. The work has been carried out by Messrs. T. J. Marshall & Co., from designs by Mr. John Stacy, and under the superintendence of the architect of the church, Mr. Spencer W. Grant.

The "Hotel Victoria."—Referring to the notice in our Supplement last week of the "Hotel Victoria," Northumberland Avenue, Messrs. Hayward Bros. & Eckstein ask us to mention that the whole of the basements are illuminated by Hayward's reflecting pavement lights.

Melbourne Centennial Exhibition.—It has been decided by the Government of the Colony of Victoria to hold an International Exhibition of Arts, Manufactures, Agricultural and Industrial Processes and Products, in the City of Melbourne, in Celebration of the Centenary of the Settlement of Australia, and the Exhibition is to be opened on August 1, 1888, and will close on January 31, 1889. An Executive Commission has been appointed by the Governor under the Seal of the Colony to conduct the Exhibition; and its London Committee, who have control of all questions concerning the Exhibitors of the United Kingdom, has its offices at 8, Victoria-chambers, Westminster, adjoining the offices of the Agent-General for the Colony.

Shepherd's Bush.—A stained-glass window of two lights, containing respectively figures, "The Light of the World," and "The Good Shepherd," with tracery containing "The Crucifixion," has been placed at the east end of St. Mary's Church, Stamford-brook, Shepherd's-bush (presented by a friend). This was also designed by Mr. J. Stacy, and executed by Messrs. T. J. Marshall & Co.

The Newcastle, Saltaire, and Liverpool Exhibitions.—We will say something about these three exhibitions next week.

Bestwood.—For several years past the vicars of Bestwood have conducted Divine Service once on Sundays in the schoolroom at Bestwood Colliery, but the want of a more suitable building has been painfully felt. At length, mainly by the liberality of the Duke of St. Albans and of the Bestwood Coal and Iron Company, a mission church has been built, from the designs of Mr. Medland Taylor, architect, Manchester, and it was opened on the 7th inst. It is built mainly of brick, with a little stone at the principal doorway, and in the chancel windows. The roof is covered with red tiles. There is a broad nave with transepts, which are to be used more as class-rooms and for secular purposes; but which can, when occasion requires, be thrown open to the nave, and so largely increase the accommodation of the church. The chancel,—that part of it which contains the altar, credence, and altar rail,—is built and arranged as it would be in a more costly and regular church. The choir seats are arranged on a platform, three steps up from the nave, and projecting from the sanctuary into the nave. There is a dwarf screen round, and at the end next the nave is an oak arch, surmounted by a cross. On the one side is the lectern, and on the other the pulpit, projecting slightly from the screen, and entered from the chancel. The choir fittings and the chief doors are principally of oak. In the gable wall of the chancel are two two-light windows, and between them in the centre is a stone altar cross. There is a marble altar ledge above the Lord's table, and a credence shelf on the side. The chancel windows are filled with tinted glass, in lead work, of a lace-like pattern, with a text in ruby glass at the foot of the lights. The font (as it may occasionally have to be removed) is of oak, pentagonal in form (an ancient form, by the way), standing on an oak platform, that the administration of the Sacrament may be duly witnessed. The seats in the nave are low, open, comfortable benches. In the transepts are convertible seats, usable either as forms and tables, or as church seats with backs. There are two side porches opening into the church and class-rooms. The girls' and young women's class-room contains a cooking-range, and a convenient china pantry, with sink, &c., adjoins it. On the other side, the west class-room will be available for use as a choristers' vestry. Adjoining it is a lavatory and cloak-room. There is a ventilating gabled turret on the middle of the roof, and a belfry on the front gable. When the transepts are thrown open to the nave, so as to use the whole building, there is comfortable sitting and kneeling room for about 360 adults. The contract sum for the entire building, fit for use, excepting only the fittings, is 1,250*l.* The builders, working under the architect's directions, are Messrs. Dennett & Ingle, of Nottingham.

The Printing-Machine Managers' Superannuation Fund.—The annual excursion to Hastings and St. Leonards, in aid of the funds of this charity, will take place on Saturday, July 2. The fund was established fourteen years ago, to provide a small allowance to printing-machine managers who from age or blindness become incapacitated from following their trade.

Wallasey.—The report of Mr. A. Salmon, surveyor to the Wallasey Local Board, upon the work executed in his department during the year 1886, has just been issued. It states that a further improvement in the property recently scheduled as insanitary has been made, by alterations in accordance with recommendations contained in a former report. The erection of the hospital for infectious diseases in Mill-lane having been commenced in April last, the buildings are now approaching completion. They consist of administrative block, isolation wards, disinfecting station, laundry, ambulance house, &c. The isolation block for the accommodation of patients consists of four wards and two rooms for nurses; two of the former contain three beds each, and the other two one bed each. The area of the hospital site is two acres in extent. The cost of the buildings, with the boundary fences, carriage-drives, and drainage will be about 3,000*l.*, an apparently excessive figure for the number of beds at present provided; but it must be remembered (says the report) that the administrative building and the laundry and disinfecting station have been designed to afford the necessary accommodation for the requirements of forty-four beds, that being the number which there will be when the scheme is carried to completion. The additional thirty-six beds will be provided at a comparatively small outlay in three pavilions, and the cost of the whole of the beds will then compare favourably with the cost of any other similar institution in the country. It is hoped, however, that the existing buildings will be all that the district will require for some years to come, but as the population increases, one pavilion, containing twelve beds, can be erected at a time. The population of the town at the present time is stated to be 29,800,—an increase of 8,600 since April, 1881.

Worcester.—Since the opening of the new church at St. Paul's in November last, the old church has been undergoing alterations to make it adaptable for a school, so as to increase the accommodation which was urgently needed in the parish. The building is connected with the old school, which has been converted into a school for infants, and the former infants' school has been fitted up as class-rooms. The schools now afford accommodation for upwards of 800 children, the total accommodation previously having been for 445. The alterations, repairs, and improvements have cost about 1,300*l.* The work has been carried on by Mr. Inward, under the superintendence of Mr. L. Sheppard, architect.

PRICES CURRENT OF MATERIALS.

TIMBER.	£. s. d.	£. s. d.
Greenheart, B.G. ....ton	6 10 0	7 10 0
Teak, E.I. ....load	8 0 0	13 0 0
Sequoia, U.S. ....foot cube	0 2 3	0 3 0
Ash, Canada ....load	3 0 0	4 10 0
Birch ,, ...	2 0 0	3 10 0
Elm ,, ...	3 10 0	4 10 0
Fir, Dantsic, &c.	1 10 0	4 0 0
Oak ,, ...	2 10 0	4 10 0
Canada ,, ...	3 0 0	6 0 0
Pine, Canada red	2 0 0	3 10 0
,, yellow	2 10 0	4 10 0
Lath, Dantsic ....fathom	3 0 0	5 0 0
St. Petersburg	4 0 0	5 10 0
Wainscot, Riga ....log	0 0 0	0 0 0
,, Odessa, crown....	2 15 0	3 0 0
Deals, Finland, 2nd and 1st...std.100	7 0 0	8 0 0
,, 4th and 3rd	5 10 0	6 10 0
Riga	5 10 0	7 0 0
St. Petersburg, 1st yellow	8 0 0	13 0 0
,, 2nd ,, ...	7 0 0	8 0 0
,, white	6 10 0	8 10 0
Swedish	6 0 0	15 0 0
White Sea	7 0 0	16 10 0
Canada, Pine, 1st	16 0 0	24 0 0
,, ,, 2nd....	10 0 0	15 0 0
,, ,, 3rd, &c....	6 0 0	9 0 0
,, Spruce, 1st	8 0 0	9 0 0
,, ,, 3rd and 2nd	5 0 0	7 0 0
Deals—New Brunswick, &c.	5 0 0	6 10 0
Battens, all kinds	4 0 0	10 10 0
Flooring Boards, sq., 1 in., prepared, First	0 8 0	0 11 0
Second	0 6 8	0 7 6
Other qualities	0 5 0	0 6 0
Cedar, Cuba ....foot	0 0 3	0 0 3½
Honduras, &c.	0 0 2½	0 0 3½
Australian	0 0 2	0 0 3
Mahogany, Cuba	0 0 4	0 0 7
St. Domingo, cargo average	0 0 4	0 0 6
Mahogany, Mexican, cargo av.....	0 0 3½	0 0 4
Tobasco ,, ...	0 0 4	0 0 5½
Honduras ,, ...	0 0 3½	0 0 5½
Maple, Bird's-eye	0 0 6	0 0 8
Rose, Rio ....ton	0 0 0	0 0 0
Bahia....	0 0 0	0 0 0
Box, Turkey ....ton	5 0 0	12 0 0
Satin, St. Domingo ....foot	0 0 5	0 0 10
Porto Rico	0 0 6	0 0 10
Walnut, Italian	0 0 4	0 0 5

METALS.	£. s. d.	£. s. d.
IRON—Bar, Welsh, in London...ton	4 7 6	4 15 0
,, ,, in Wales	4 2 6	4 7 6
,, Staffordshire, London	5 10 0	6 0 0
Sheets, single, in London	6 15 0	8 10 0
Hoops ,, ...	6 0 0	7 0 0
Nail-rods ,, ...	5 15 0	6 10 0
COPPER—		
British, cake and ingot ....ton	42 10 0	43 0 0
Best selected	44 5 0	44 15 0
Sheets, strong....	50 0 0	0 0 0
Chili, bars	39 5 0	39 12 6
YELLOW METAL ....lb.	0 0 0	0 0 0
LEAD—		
Pig, Spanish ....ton	12 0 0	0 0 0
English, common brands....	12 7 6	0 0 0
Sheet, English	13 5 0	13 10 0
SPELTER—		
Silesian, special ....ton	14 7 6	14 10 0
Ordinary brands....	14 5 0	14 7 6
TIN—		
Straits....ton	104 15 0	0 0 0
Australian	105 0 0	0 0 0
English ingots	107 10 0	0 0 0

METALS (*continued*).	£. s. d.	£. s. d.
ZINC—		
English sheet ....ton	0 0 0	0 0 0
OILS.		
Linseed ....ton	20 17 6	21 5 0
Cocoanut, Cochin	31 0 0	33 0 0
Ceylon	23 15 0	24 0 0
Palm, Lagos	21 10 0	0 0 0
Rapeseed, English pale	22 10 0	0 0 0
,, brown	21 0 0	0 0 0
Cottonseed, refined	19 5 0	20 10 0
Tallow and Oleine....	25 0 0	45 0 0
Lubricating, U.S.	5 0 0	6 0 0
,, refined....	5 0 0	12 0 0
TURPENTINE—		
American, in casks ....cwt.	1 8 0	0 0 0
TAR—		
Stockholm ....barrel	0 15 0	0 0 0
Archangel	0 12 0	0 0 0

COMPETITIONS, CONTRACTS, & PUBLIC APPOINTMENTS.

Epitome of Advertisements in this Number.

COMPETITIONS.

Nature of Work.	By whom required.	Premium.	Designs to be delivered.	Page.
Laying-out Cemetery, &c., Oldham....	Cemeteries Com.....	60 gs. and 30 gs.....	July 2nd	ii.

CONTRACTS.

Nature of Work, or Materials.	By whom required.	Architect, Surveyor, or Engineer.	Tenders to be delivered.	Page.
New Sewers, &c.	St. Mary, Islington, Vestry	*Official*	May 25th	ii.
Tower and Spire to Church, Wandsworth.....	....	G. Patrick	do.	ii.
Cleaning & Painting Works, Caterham Asylum	Met. Asylums Board ...	*Official*	May 26th	ii.
Painting and other Works at Infirmary.....	Fulham Union	do.	do.	ii.
Repairing and Painting Lamp Columns.....	Met. Board of Works...	do.	May 27th	ii.
Rebuilding Royal Infirmary, Liverpool	The Committee.....	A. Waterhouse.....	May 30th	ii.
New Waiting-Room, &c., Bridgend Station ..	Great Western Ry. Co.	*Official*	May 31st	ii.
Painting, &c. Works, Infirmary	St. Marylebone Grdns.	do.	do.	xii.
Waterworks....	Northwich Local Board	H. Bancroft	do.	ii.
New Cottage Homes, &c.	West Derby Union	C. H. Lancester.....	do.	xii.
Erection of Shops, Cottages, &c., Barking ..	H. Harvey George, Esq.	C. J. Dawson.....	do.	ii.
Alterations, &c., Laundry, Camberwell House	The Proprietors	Giles & Gough	June 1st	ii.
Additions, &c., to Schools	Guildford School Board	S. Welman.....	June 4th	ii.
Alterations, &c., to Cator Estate Office.....	Beckenham Local Brd.	G. B. Carlton.....	June 6th	xii.
Kerbing and Brick Paving.....	do.	do.	do.	xii.
Oak Cleft Fencing and Dwarf Wall.....	do.	do.	do.	xii.
Broken Guernsey Granite	Chelmsford Local Bd....	*Official*	do.	ii.
Main Drainage Works	Finchley Local Board	G. W. Brumell.....	do.	xii.
Laying-out Burial Ground	St. Olave's, Southwark, Churchwardens	G. W. Thompson.....	do.	xii.
Erection of Markets, &c.....	Carlisle Cor.....	Cawston & Graham	do.	ii.
Boating Pool and Swimming Bath	West Bromwich Cor....	J. T. Eayrs.....	June 7th	ii.
Drainage Works.....	Cheshunt Local Board	T. Bennett	June 8th	xii.
Carriageway and Footways.....	Metro. Board of Works	*Official*	June 10th	xii.
Kerbing Footpaths	Chelmsford Local Brd.	C. Pertwee.....	June 13th	xii.
Widening, &c., of Glasgow Bridge	City of Glasgow.....	Miller & Bell.....	June 15th	xii.
Alterations, &c., to Schools, Barking	The Committee.....	C. J. Dawson.....	Not stated...	ii.
Painting, &c., Works, Portsmouth	War Department.....	*Official*	do.	xii.

PUBLIC APPOINTMENTS.

Nature of Appointment.	By whom Advertised.	Salary.	Applications to be in.	Page.
Borough Surveyor.....	King's Lynn Cor.....	250*l.*, &c.	May 30th	xvi.
Head Master	Londonderry Sch. of Art	Not stated	June 4th	xvi.

TENDERS

BATTERSEA.—For alterations and additions to the schoolrooms at the Congregational Church, Bridge-road, Battersea. Mr. T. Heygate Vernon, architect:—

Richens & Mount....	£892 0 0
W. Johnson	883 0 0
Newton & Idle	867 0 0
Trigg	807 0 0
Turtle & Appleton	784 0 0
Holloway Bros. (accepted)	778 0 0

BATTERSEA.—For alterations and additions to the Alliance Banking Company's premises, No. 30, Victoria-road (Battersea Park Branch). Mr. Frederick Pinches, architect:—

G. N. Street	£1,408 0 0
Turtle & Appleton	1,290 0 0
Holloway Bros. (accepted)	1,159 0 0
F. R. Turtle	1,135 0 0

BEDFORD.—For the erection of Primitive Methodist chapel, Park-road. Mr. Charles Carter, architect. No quantities:—

Jay	£577 0 0
Haynes & Son	530 0 0
Harrison....	519 0 0
Warton & Walker	515 0 0
Carter	485 15 0
White (accepted)	472 0 0

BICKLEY (Kent).—For repairs and decorations at "Merevale," Bickley, for Mr. S. Green. Mr. Arthur W. Saville, architect, 99, Strand:—

Harrison & Spooner	£869 6 2
D. Inns	864 0 9
R. A. Lowe	749 0 0
Oldrey & Co. (accepted)	650 0 0

FROWLESWORTH (Leicestershire).—For restoration of the parish church, for the Committee. Mr. W. Bassett Smith, architect, Drummond Chambers, 10, John-street, Adelphi:—

D. Ireson, Northampton	£1,453 0 0
Baning & Son, London*	1,320 19 0

* Accepted.

CORK.—For building dining-hall and other works, Cork District Lunatic Asylum. Mr. William H. Hill, architect:—

J. Remperton....	£2,998 0 0
S. Hill	2,940 0 0
S. Thomas	2,886 0 0
P. Murphy	2,764 0 0
J. Lisk....	2,658 0 0
E. Fitzgerald....	2,647 0 0
B. McMullen....	2,600 0 0
T. O'Flynn (accepted)	2,540 0 0

HACKNEY.—For boundary walls at St. Luke's Church, Hackney. Mr. Gilbee Scott, architect:—

Barratt & Power	£880 0 0
Harris & Wardrop	610 0 0
T. Boyce....	598 0 0
W. Shurmur	522 0 0

HAMPSTEAD.—For completing stabling, West Hampstead. Mr. Banister Fletcher, architect:—

Steele Bros.	1,134 0 0
Jarvis	1,057 0 0
Neave & Neave....	1,008 0 0
Blyton	999 0 0
Stevenson	730 0 0
Richardson....	729 0 0
Bursill....	575 8 0
Mansbridge (accepted)	571 0 0

HAMPSTEAD.—For alteration (1st contract) to "Anglebay," West Hampstead. Mr. Banister Fletcher, architect:—

Neave & Neave....	£345 0 0
Steele Bros.	325 0 0
Tout....	310 0 0
Bursill	307 10 0
Mansbridge (accepted)	283 0 6
J. M. Goodwin (too late)	275 0 0

ILFORD.—For decorating and improving the Reading Room, for the Trustees. Mr. P. Watkins, architect:—

W. Watson....	£288 0 0
G. Holmes & Sons	286 0 0
C. Barnes (accepted)	243 10 0

KENSINGTON.—For the erection of St. Church, Vicarage-gardens, Kensington. Mr. Arthur Baker, architect, Warwick-gardens, Kensington. Quantities by Mr. J. S. Alder, Old Broad-street:—

C. Wall	£11,223 0 0
Lathey Bros.	10,425 0 0
Lovatt, Wolverhampton	10,334 0 0
W. Downs	10,295 0 0
Mowlem & Co.	10,015 0 0
Nash	9,900 0 0
Thompson	9,897 0 0
Higgs & Hill	9,898 0 0
Garrud	9,777 0 0
Peto Bros.	9,765 0 0
Killby & Gayford	9,732 0 0
Parnell, Rugby	9,691 0 0
J. T. Chappell	9,444 0 0
Macey & Sons	9,300 0 0
E. C. Howell & Son, London and Bristol	8,969 0 0

KINGSTON-ON-THAMES.—For the construction of sewage outfall works, for the borough of Kingston-on-Thames. Mr. Henry Macaulay, architect and surveyor:—

Contract No. 1.—Buildings, Tanks, &c.

McKenzie, Wandsworth	£24,076 0 0 !
Webster, St. Martin's-place, W.C.	18,500 0 0
Neave, Leytonstone	17,134 0 0
Nelson & Co., Cardiff	16,454 0 0
Kirk Bros., Batterseа	16,400 0 0
Fish, Preston	16,400 0 0
Cooke & Co., Batterseа	15,950 0 0
Mowlem & Co., Westminster	15,900 0 0
Dickenson, Loughborough Junction	15,555 0 0
Marshall, Shalford	15,500 0 0
Green & Parker, Cardiff	14,739 0 0
Lucas & Son, Kensington	14,655 0 0
W. Cunliffe, Dorking (accepted)	14,205 0 0
Simmonds, Reading	13,999 0 0 !

Contract No. 2.—Engines, Boilers, Machinery, &c.

Lucas & Son, Kensington	10,527 0 0
Mowlem & Co., Westminster	9,833 0 0
Dickenson, Loughborough Junction	9,011 0 0
Bird & Co., London	9,000 0 0
Holroyd, Horsfield, & Wilson, Leeds	8,730 16 8
W. Cunliffe, Dorking (accepted)	8,450 0 0
Glenfield Foundry Co., Kilmarnock	8,421 0 0
Charleston Foundry Co., St. Austell	8,170 0 0

KINGSTON-ON-THAMES.—For alterations and additions to the Kingston Workmen's Club and Institute, Fairfield-road, Kingston-on-Thames. Mr. W. H. Hope, architect:—

	General Estimate.	Alternative Staircase.
F. Smith & Son	£2,657 14 5	£73 3 6
C. Wall	2,426 0 0	92 0 0
A. Merryweather	2,425 17 0	106 15 0
C. Oldridge & Sons	2,390 0 0	73 0 0
G. Huckle	2,389 0 0	84 0 0
W. Callingham	2,288 0 0	127 0 0
G. Wernham	2,220 0 0	82 0 0
R. L. Wood	2,195 0 0	79 0 0
W. H. Simonds	2,142 0 0	66 10 0
J. Bottrill	2,140 0 0	79 10 0
J. Wheatley & Sons	2,136 12 0	67 0 0
A. Brett	2,130 0 0	110 0 0
G. Constable	2,100 0 0	75 0 0
G. Stephenson	2,054 0 0	70 0 0
D. Taylor	2,000 0 0	110 0 0
F. R. Turtle (accepted)	1,998 0 0	52 0 0
G. Marsh	1,856 3 0	75 0 0

LEYTONSTONE (Essex).—For alterations and additions to the casual wards at the West Ham Union Workhouse. Mr. F. T. Sturdy, architect. Quantities by Messrs. R. L. Curtis & Sons:—

R. Edwards, Cambridge-road	£4,400 0 0
Coulsell Bros., Bethnal Green	4,023 0 0
C. T. Sherwood, Shalford	3,994 0 0
Faulkner	3,787 0 0
D. Sayer, Leyton	3,730 0 0
A. Read, Stratford	3,636 0 0
Atherton & Latta, Stratford	3,590 0 0
Gregar, Stratford	3,584 0 0
A. E. Bray, Chelsea	3,571 0 0
Dabbs, Stamford Hill	3,508 0 0
J. Holland, Poplar	3,360 0 0
A. Nicholls, Leytonstone (accepted)	3,131 0 0

LONDON.—For interior repairs, cleaning, and painting at the Asylum Buildings, Cleveland-street, Fitzroy-square, W., and for alterations to receiving rooms, for the managers of the Central London Sick Asylum District, Mr. William Stephens Cross, 18, Outer Temple, Strand, architect:—

		A.
H. Bodsin, Leyton	£997 0 ...	99 0
W. Hensman, Windmill-street	974 0 ...	110 0
Collis Willmott, Hackney	858 0 ...	—
J. & F. Glew, Museum-street	719 0 ...	79 0
Dorrell & Co., Chandos-street	660 0 ...	80 0
Woolard & Son, Blackfriars-road	630 17 ...	80 0
W. G. Silby, Pall-mall	620 0 ...	59 0
W. Furniss, Herne Hill	610 0 ...	—
J. H. Watkins, Kentish Town	600 0 ...	—
Hudson, Kearley, & Co.,* Roodlane	560 0 ...	60 0
Bishop Bros. & Marston, Islington	559 0 ...	62 0
R. Edwards, Cambridge-road	460 0 ...	—
J. & F. May, High Holborn	— ...	88 10

* Accepted for both.

A. Alterations to receiving-room, fitting up new baths, &c.

LONDON.—For new club premises for the Netherlands Choral Society, Great Alie-street, Whitechapel. Mr. Bentley Haynes and Mr. Francis Miller, architects. Quantities by Mr. L. A. Francis:—

Colls & Sons	£2,877 0 0
G. Hardy	2,865 0 0
Greenwood	2,777 0 0
Housegood	2,673 0 0
Staines	2,484 0 0
Patman & Fotheringham	2,463 0 0
Palmer	2,350 0 0
Lusk	2,260 0 0
Jackson & Todd	2,110 0 0
George Barker	2,099 0 0

LONDON.—For the erection of four shops, with dwellings, situate at St. Anne's Wharf, Burdett-road, Limehouse, for Messrs. Abbott & Fletcher. Mr. Charles Dunch, architect. Quantities by Mr. James F. Wesley, Forest Gate:—

Hearle & Son	£2,449 0 0
Perry & Co.	2,448 0 0
Gregar	2,320 0 0
J. & J. Greenwood	2,298 0 0
Morter	2,296 0 0
J. H. Johnson	2,289 0 0
Harris & Wardrop	2,278 0 0
Sburmur	2,250 0 0
Walker	2,096 0 0

LONDON.—For rebuilding No. 18, Princes-street, Cavendish-square, W., for Mr. E. Jones. Mr. J. F. Mathews, architect. Quantities supplied by the architect:—

Ashby Bros.	£2,268 0 0
Colls & Son	2,257 0 0
Rider & Son	2,249 0 0
Downs	2,239 0 0
Kirk & Randall	2,230 0 0
Saunders	2,200 0 0
Hunt	2,184 0 0
Patrick & Son (accepted)	2,168 0 0
Spencer	1,885 0 0

LONDON.—For alterations and repairs to the out-patients' department of the City Orthopædic Hospital, Hatton-garden:—

Roberts	£170 0 0
Beasley	150 0 0
Cornish (accepted)	115 0 0

LONDON.—For painting works at the Workhouse and Infirmary, Prince's-street, Old Gravel-lane, St. George-in-the-East, for the Guardians of the Poor St. George's-in-the-East. Messrs. Wilson, Son, & Aldwinckle, architects, 2, East India-avenue, Leadenhall street:—

Castle	£1,447 0 0 !
Holliday	1,075 0 0
McCarthy	839 0 0
Proctor	750 0 0
Holland (accepted)	698 0 0 !

LONDON.—For building new photographic studio and shop front, &c., No. 76, Wandsworth-road, S.W. Mr. Jas. M. Cable, architect:—

W. Jones	£476 0 0
Holloway Bros.	443 0 0
Stevens & Sons	410 0 0
Hooper	395 10 0

LONDON.—For alterations and additions to the London and County Banking Company's premises, Aldersgate-street Branch. Mr. Zephaniah King, architect:—

A. Bush	£6,795 0 0
J. Holloway	6,645 0 0
Holloway Bros.	6,590 0 0
Rider & Son	6,418 0 0
Godfrey & Son	6,268 0 0
Higgs & Hill	5,826 0 0
Chappell	5,798 0 0
J. Morter	5,773 0 0

LONDON.—For alterations and additions to the London and County Banking Company's premises, Victoria-street Branch. Mr. Zephaniah King, architect:—

A. Bush	£3,841 0 0
J. Holloway	3,630 0 0
Rider & Son	3,588 0 0
Holloway Bros.	3,509 0 0
J. Morter	3,427 0 0
Godfrey & Son	3,329 0 0

LONDON.—For residence, Romford-road, E., for Mr. E. Witherspoon. Mr. C. E. Jackson, architect:—

Higgs	£2,806 0 0
Barnes	2,415 0 0
W. Shurmur	2,397 0 0
B. E. Nightingale	2,362 0 0
J. Morter	2,120 0 0
H. Lee	2,044 0 0
Jackson & Todd	2,029 0 0
Everard	1,997 0 0
W. Gregar	1,960 0 0

LONDON.—For rebuilding No. 62, Shoreditch, for Messrs. Hopkins & Peggs. Mr. J. W. Peggs, architect:—

Kiddle & Son	£1,840 0 0
W. Shurmur	1,791 0 0
J. Chessum	1,621 0 0
J. R. Cordell	1,587 0 0
Killby & Gayford	1,423 0 0

LONDON.—For proposed alterations at the Circus Café, 213, Oxford-street. Mr. Banister Fletcher, architect:—

Patman & Fotheringham	1,898 0 0
B. E. Nightingale	1,840 0 0

LONDON.—For alterations to the Artichoke public-house, Clare-street, W.C., for Mr. Gurney. Mr. Lackie, architect, 38, Gaisford-street:—

Davis & Son	£518 0 0
Knight	499 10 0
Ward & Lamble	437 0 0
Hornett	425 0 0

LONDON.—For alterations and repairs to the Dolphin public-house, Milk-street, Cheapside, for Messrs. Deakin & Crimmen. Mr. Arthur W. Saville, architect, 99, Strand. Quantities supplied:—

T. L. Green	£989 0 0
J. Anley	930 0 0
W. Oldrey & Co.	898 0 0
Ward & Lamble	879 0 0
Spencer & Co.	870 0 0
T. Gregory & Co.	847 0 0
W. Royal	829 0 0
John Walker	796 0 0
Pewterer's Work.	
W. Helling	104 0 0
Watts & Co.	88 17 0
T. Heath	77 0 0

LONDON.—For new stable buildings at 14, St. Luke's-road, W., for Mr. J. Hughes. Mr. Arthur W. Saville, architect, Strand:—

C. H. Cutting & Sons (accepted)	£389 0 0

LONDON.—For the erection of new warehouse and offices, Cardington-street, N.W., for McCorquodale & Co., Limited. Mr. H. Phelps Drew, architect, 99, Gloucester-road, South Kensington. Quantities by Mr. C. Dannell:—

Longmire & Burge	£9,450 0 0
Chappell	8,934 0 0
Bywaters	8,867 0 0
Brass & Son	8,766 0 0
Grover & Son	8,766 0 0
Scrivener & Co.	8,538 0 0
Spencer & Co. (accepted)	8,093 0 0

MAIDENHEAD.—For swimming-bath, for the Maidenhead Town Council:—

Woodbridge	£356 0 0
Snell (accepted)	280 0 0
Gilroy	223 6 6

NEWINGTON.—For dilapidations and repairs at No. 67, Newington Causeway, S.E.:—

C. Hyatt (accepted)	£343 0 0

NEWMARKET.—For building new house and stables at Newmarket, for Mr. Peter Price. Mr. John Flatman, architect, Newmarket:—

Kerridge & Shaw	£2,997 0 0
Smith	2,720 0 0
Simpson	2,693 0 0
Hook & Tebbitt	2,669 0 0
Linzell (accepted)	2,337 0 0
Blyth & Hunt	2,290 0 0

NEWMARKET.—For building new drill-hall at Newmarket, for H Company, 6th West Suffolk R.V. Corps. Mr. John Flatman, architect, Newmarket:—

Kent	£491 5 0
Simpson & Smith	375 0 0
Linzell	360 0 0

NORTHAMPTON.—For new Wesleyan Church Queen's-road, for the trustees. Messrs. H. H. Dyer & Son, architects:—

Reynolds & Son, Northampton	£4,000 0 0
H. Watkins, Northampton	3,895 0 0
C. Claridge, Banbury	3,690 0 0
Woodford & Son, Northampton	3,540 0 0
A. Hawtin, Northampton	3,540 0 0
Green Bros., Northampton	3,520 0 0
H. Martin, Northampton	3,464 0 0
G. Fisher, Northampton	3,445 0 0
D. Ireson, Northampton	3,444 0 0
S. B. Clarke, Northampton	3,398 0 0
Clayson Bros., Cooknoe	3,393 0 0
S. Wingrove, Northampton	3,345 0 0
W. Heap, Northampton (accepted)	3,220 0 0

NORTHAMPTON.—For alterations at the Union Workhouse, Northampton, for the Board of Guardians. Mr. Edmund Law, architect:—

G. W. Mitchell	£895 0 0
Clayson, Bros., Cooknoe*	767 0 0
Ireson, D.	748 0 0
Beardsmore, W.	721 0 0
Woodford & Son	720 0 0
Branson & Son	711 0 0
G. J. Fisher	695 10 0
H. Martin	693 0 0
A. P. Hawtin	686 0 0
J. Dunkley & C. J. Bronson	675 0 0
Green, Bros.	674 0 0
G. White	641 0 0
R. Hickman (accepted)	623 10 0

* The rest of Northampton.

NORWOOD.—For outdoor relief station, lodge, and stables, and other works, at Lower Norwood, S.E., for the Guardians of the Poor of the Parish of Lambeth. Mr. S. R. J. Smith, architect. Quantities supplied:—

Ockenden	£5,868 0 0
Martin Wells & Co.	4,740 0 0
W. Smith	4,698 0 0
Sabey & Son	4,499 0 0
Leeks & Hooker	4,470 0 0
W. Fox	4,429 0 0
E. C. Howell & Sons	4,421 0 0
F. & H. Higgs	4,353 0 0
Bentley	4,312 0 0
W. Downs	4,300 0 0
R. Mayo	4,250 0 0
W. Johnson	4,240 0 0
Leslie & Knight	4,100 0 0
A. Deacon & Co.	4,098 0 0
W. & H. Castle	3,987 0 0
J. O. Richardson, Albert Works, Peckham (accepted)	3,909 0 0
New Roads, &c.	
Mayo (accepted)	£340 0 0
Drains.	
F. Higgs (accepted)	£290 0 0

PLASHET (Essex).—For repairs and painting at the Industrial Schools, Plashet, for the Guardians of the Poor of St. George's-in-the-East. Messrs. Wilson, Son, & Aldwinckle, architects, 2, East India-avenue, Leadenhall-street:—

McCarthy	£290 0 0
Proctor	275 0 0
Holland (accepted)	236 0 0

RICHMOND (Surrey).—For alterations and repairs at Old Friars, The Green (Richmond Liberal and Radical Club), for Mr. C. Durant Hodgson. Mr. T. C. Barralet, surveyor, Bridge Chambers, Richmond. Quantities supplied:—

Field	£279 0 0
Soole & Son	245 0 0
Cain & Son	241 0 0
Collings	240 0 0
Carman (accepted)	234 15 0

SOUTHGATE.—For additions to six houses at Bowes-road, Southgate, for Mr. Sidney. Mr. W. Smith, architect, 1, Gresham-buildings:—

Mattock Bros.	£515 0 0
Larke & Son	498 0 0
Dearing & Son	495 0 0
Wheeler	490 0 0
Clarke Bros.	450 0 0
Ward & Lamble	437 0 0
Saye	390 0 0
Langham	339 0 0

SHADWELL.—For taking down and rebuilding premises known as Union Wharf, situate and being No. 68, Wapping-wall, in the parish of St. Paul, Shadwell, for Gingell, Son, and Company (Limited) :—

Colls & Son	£3,490	0	0
Shurmur	3,393	0	0
Mowlem & Co.	3,347	0	0
Mark Gentry	3,240	0	0
Morter	3,187	0	0
Harris & Wardrop	3,173	0	0
Gladding	3,154	0	0
Nightingale	3,077	0	0
Ashby & Horner	3,000	0	0
J. & J. Greenwood	2,899	0	0
J. Grover & Son	2,788	0	0

SOUTH KENSINGTON.—For new drains, access-chambers, and plumbers' work, and other alterations and improvements, to 6, Foulis terrace, S.W., for Miss M. Gremston. Mr. Chas. Ed. Gritton, A.-M. Inst. C.E., surveyor :—

Winser & Co. 52, Buckingham Palace-road*	£100	0	0

* Lowest of three tenders received (accepted).

SOUTHWARK.—For rebuilding premises, No. 18 and 19, Newcomen-street, S.E. Mr. E. H. Burnell, architect :—

Hall, Beddall, & Co.	£1,984	0	0
Rider & Son	1,980	0	0
Wagstaff & Son	1,968	0	0
W. Downes	1,887	0	0
Holloway Bros.	1,891	0	0
Hart	1,790	0	0
Castle	1,677	0	0
W. D. & F. Croaker	1,620	0	0

SUTTON.—For additions to "Grange Bank," Sutton, Surrey, for Miss Smith. Mr. Frederick Colyer, architect, 18, Great George-street, Westminster :—

S. Page, Croydon	£471	0	0
R. J. Humphris, Sutton (accepted)	461	0	0

WALTON-ON-THAMES.—For building new Wesleyan chapel and schools, Walton-on-Thames. Mr. Herbert Isitt, architect :—

		Extra for Kentish Rag.		
Doubleday & Son	£4,390	£300	0	0
R. Pink	3,587	35	14	0
Howell & Son	3,547	—		
Piller & Son	3,513	—		
S. Wood	3,490	30	12	0
W. & A. Brown	3,433	60	0	0
Kirk Bros.	3,400	45	0	0
W. R. Wood	3,400	—		
A. R. Flew	3,390	65	0	0
A. Brett	3,335	30	0	0
Sanders	3,323	25	0	0
Snell & Co.	3,304	127	10	0
Faulkner	3,298	102	0	0
Reavell	3,279	—		
Peters	3,270	30	12	0
Wheatley	3,248	30	12	0
J. W. Jones	3,209	20	0	0
Bottrill	3,194	—		
Hickenbotham	3,100	53	0	0
Knight & Son, Chertsey*	3,101	36	0	0
Ingram & Son	3,077	64	0	0
Newland	3,045	50	0	0
Carlicke	2,987	90	0	0
E. Jarvis, Banbury	2,770	20	0	0

* Accepted.

WANDSWORTH.—For bar fittings at the Plough Hotel, St. John's Hill, New Wandsworth, for Mr. J. Row. Mr. H. I. Newton, architect, Queen Anne's Gate, Westminster :—

Godden	£750	0	0
Lamble	670	0	0
Jackson & Todd	665	0	0
Burman & Son (accepted)	640	0	0
Pewterer's Work.			
Heath (accepted)	79	0	0

WINCHMORE HILL.—For the erection of a pair of semi-detached villa-residences, Winchmore-hill. Mr. H. Townley Sugden, architect, King-street, Cheapside. Quantities by Messrs. Duffield & Player, Bromley, Kent :—

Riley Bros., King's Cross	£1,395	0	0
Mitchell, Soho	1,364	10	0
Wheeler, Winchmore-hill	1,330	0	0
Sayer, Enfield	1,178	0	0
Fairhead & Sons, Enfield (accepted)	1,150	0	0

[Surveyor's estimate, £1,234.]

WEST HAM (Essex).—For the erection of one dwelling-house in Godwin-road, Forest Gate, for Mr. C. J. Barr. Quantities not supplied :—

G. Beale, Forest Gate	£785	0	0
Carrington	635	0	0
A. Nicholls, Leytonstone	631	0	0
Baney, Leytonstone	625	0	0
Catley, Leytonstone	595	0	0

Villa Residences, Wimbledon.—The architect of these buildings, for which we published tenders last week (p. 738), is Mr. J. Hume, of Hammersmith.

*** **SPECIAL NOTICE.—Lists of Tenders frequently reach us too late for insertion. They should be delivered at our office, 46, Catherine-street, W.C., not later than 12 Noon on THURSDAYS.**

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Addressed to No. 46, Catherine-street, W.C.

Advertisements for the current week's issue must reach the Office before THREE o'clock p.m. on THURSDAY.

SPECIAL.—ALTERATIONS IN STANDING ADVERTISEMENTS or ORDERS TO DISCONTINUE same, must reach the Office before TEN o'clock on WEDNESDAY mornings.

The Publisher cannot be responsible for DRAWINGS, TESTIMONIALS, &c. left at the Office in reply to Advertisements, and strongly recommends that of the latter COPIES ONLY should be sent.

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TO CORRESPONDENTS.

Registered Telegraphic Address, "THE BUILDER, LONDON."

H. P. A.—J. J. S.—A. C.—T. J. M. & Co.—M. M.—W. N. R. (thanks; not required).—E. M. K.—W. H. C. (below our mark).

All statements of facts, lists of tenders, &c., must be accompanied by the name and address of the sender, not necessarily for publication

We are compelled to decline pointing out books and giving addresses.

NOTE.—The responsibility of signed articles, and papers read at public meetings, rests, of course, with the authors.

We cannot undertake to return rejected communications.

Letters or communications (beyond mere news-items) which have been duplicated for other journals, are NOT DESIRED.

All communications regarding literary and artistic matters should be addressed to THE EDITOR; all communications relating to advertisements and other exclusively business matters should be addressed to THE PUBLISHER, and not to the Editor.

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"THE BUILDER" is supplied DIRECT from the Office to residents in any part of the United Kingdom at the rate of 18s. per annum PREPAID. To all parts of Europe, America, Australia, and New Zealand, 26s. per annum. To India, China, Ceylon, &c. 30s. per annum. Remittances payable to DOUGLAS FOURDRINIER, Publisher, No. 46, Catherine-street, W.C.

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Corsham Down. Stoke Ground.
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Farleigh Down. West Wood.

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